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98th Congress — 1st Session • January 3–November 18, 1983

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98th Congress, 1st Session - - - - - - - House Document No. 98-72

DISTRICT OF COLUMBIA BUDGET AUTHORITY REDUCTIONS

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

PROPOSED REDUCTIONS IN 1983 BUDGET AUTHORITY FOR
THE DISTRICT OF COLUMBIA

JUNE 21, 1983.—Referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11-011 O WASHINGTON : 1983

52-030 O—84——1 (Pt. 1) BLR

THE WHITE HOUSE,
Washington, June 20, 1983.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: In accordance with the District of Columbia Self-Government and Governmental Reorganization Act (Public Law 93–198), I ask the Congress to consider proposed reductions in 1983 budget authority for the District of Columbia in the amount of $23,853,900.

This reduction is in District of Columbia funds and does not affect the Federal Budget.

Respectfully,

RONALD REAGAN.

Enclosure.

GOVERNMENT OF THE DISTRICT OF COLUMBIA

SUPPLEMENTAL, FISCAL YEAR 1983

	1983 presently available	1983 revised estimate	1983 proposed supplemental
GOVERNMENTAL DIRECTION AND SUPPORT			
Total (Budget Act)	$69,545,500	$66,786,500	-$2,759,000
Office of the Mayor	1,819,600	1,069,600	-750,000
Office of Financial Management	18,296,700	16,837,700	-1,459,000
Department of General Services	23,353,600	22,803,600	-550,000
Funds from the above agencies are being transferred from the Governmental Direction and Support appropriation title to meet the anticipated spending needs of other District agencies.			
ECONOMIC DEVELOPMENT AND REGULATION			
Sub-total Program	58,485,400	55,946,600	-2,538,800
Pay Adjustment		+ 136,100	+ 136,100
Total (Budget Act)	58,485,400	56,082,700	-2,402,700
Office of Planning and Development	3,177,100	3,064,100	-113,000
Department of Housing and Community Development	20,539,100	18,864,600	-1,674,500
Housing Finance Agency	2,593,200	1,821,200	-772,000
Office of the Surveyor	687,700	629,900	-57,800
Funds from the above agencies are being transferred from the Economic Development and Regulation appropriation title to meet the anticipated speding needs of other District agencies.			
Public Service Commission	1,764,300	1,837,700	+73,400
Funding is requested for pay adjustment ($28,400) and to purchase three word processing units and associated equipment and materials ($45,000).			
Office of Peoples Counsel	391,700	396,800	+5,100
Funds are requested to provide the remaining portion of the fiscal year 1983 pay adjustment.			

	1983 presently available	1983 revised estimate	1983 proposed supplemental
PUBLIC SAFETY AND JUSTICE			
Sub-total Program	$409,242,100	418,372,700	+9,130,600
Pay Adjustment		+ 5,895,500	+5,895,500
Total (Budget Act)	409,242,100	424,268,200	+15,026,100
Fire Department Funding is requested for Fireboat repairs ($500,000) and overtime pay ($944,000).	47,569,000	49,013,000	+1,444,000
Court of Appeals Funding is requested for judicial pay raises.	2,825,500	2,846,100	+20,600
Superior Court Funding is requested for witness fees ($126,000); juror fees ($508,000); and judicial pay raise ($87,900)	30,941,800	31,663,700	+721,900
D.C. Court System Funding is requested for Criminal Justice Act Program.	6,368,200	7,290,500	+922,300
Department of Corrections Funding is requested for part-year funding for 90 correctional officers ($1,157,800); two training positions ($79,900); partial funding of care factor for 950 unbudgeted residents ($1,292,600); and full funding of payment to house D.C. Code violators in Federal institutions ($3,491,500).	87,795,900	93,817,700	+6,021,800
PUBLIC EDUCATION SYSTEM			
Sub-total Program	438,724,200	436,853,100	-1,871,100
Pay Adjustment		+ 191,400	+ 191,400
Total (Budget Act)	438,724,200	437,044,500	-1,679,700
School Transit Subsidy These funds are being transferred from Public Education System appropriation title to meet the anticipated spending needs of other District agencies.	5,681,000	3,809,900	-1,871,100

	1983 presently available	1983 revised estimate	1983 proposed supplemental
HUMAN SUPPORT SERVICES			
Sub-total Program..............................	466,890,500	468,977,900	+2,087,400
Pay Adjustment.................................		+ 2,315,300	+2,315,300
Total (Budget Act).............................	466,890,500	471,293,200	+4,402,700
D.C. General Hospital......................... Funding is requested for increase in subsidy to D.C. General Hospital.	35,100,000	37,187,400	+2,087,400
TRANSPORTATION SERVICES AND ASSISTANCE			
Total (Budget Act).............................	135,712,400	135,167,800	-544,600
Department of Transportation.................. These funds are being transferred from Transportation Services and Assistance appropriation title to meet the anticipated spending needs of other District agencies.	43,535,700	42,991,100	-544,600
ENVIRONMENTAL SERVICES AND SUPPLY			
Total (Budget Act)............................	38,337,000	32,832,500	-5,504,500
Department of Environmental Services........	32,910,000	32,832,500	-77,500
Payment to Water and Sewer Fund............. These funds are being transferred from Environmental Services and Supply appropriation title to meet the anticipated spending needs of other District agencies.	5,427,000	.....	-5,427,000

	1983 presently available	1983 revised estimate	198 propose supplemental
PERSONAL SERVICES			
Allocated to Other Appropriation Titles		.....	-8,615,300
Reduced from this Appropriation Title		.....	-8,748,800
Unadjusted Total............................	17,364,100	.....	17,364,100
Council Adjustment (not included in Budget Act)...................................		.....	+ 77,000
Total (Budget Act)	17,364,100	77,000*	-17,287,100
Personal Services.......................... This supplemental request proposes to eliminate the FY 1983 budget of the Personal Services appropriation. Of the amount appropriated $8,615,300 has been allocated by the Mayor to agencies which require additional pay adjustment funding in accordance with the FY 1983 Appropriations Act, P.L. 92-378 and $8,748,800 has been reduced from the budget.	17,364,100	77,000*	-17,287,100
ENERGY ADJUSTMENT			
Total.......................................	-2,078,500	.....	+2,078,500
Energy Adjustment Transfers from other appropriation titles to offset budgeted unallocated reductions to agency energy budgets.	-2,078,500	.....	+2,078,500
UNALLOCATED GENERAL FUND ADJUSTMENT			
Total.......................................	.....	15,183,600	-15,183,600
Unallocated General Fund Adjustment........ Reductions in budgetary authority to be realized by agencies once the budget is approved by Congress.	.....	15,183,600	-15,183,600
Total, General Fund..			-23,853,900

*See transmittal letter

	1983 presently available	1983 revised estimate	1983 proposed supplemental
WASHINGTON CONVENTION CENTER ENTERPRISE FUND			
Washington Convention Center................	7,574,000	8,204,700	+630,700
Funding is requested for salaries and benefits for 25 additional temporary full-time employees ($182,400); salaries for part-time employment to accommodate even-based staff requirements ($70,000); long distance telephone service for exhibitors ($112,000); and contractual services for skilled labor e.g., plumbers, electricians and carpenters ($266,300).			

AN ACT

IN THE COUNCIL OF THE DISTRICT OF COLUMBIA

To approve the requests of the District of Columbia government for supplemental appropriations for the fiscal year ending September 30, 1983, and for other purposes.

BE IT ENACTED BY THE COUNCIL OF THE DISTRICT OF COLUMBIA, That this act may be cited as the "Fiscal Year 1983 Supplemental Budget Request and Rescission of Authority Act of 1983".

Sec. 2. The Council of the District of Columbia approves the following supplemental budget requests of the District of Columbia government for the fiscal year ending September 30, 1983:

"DISTRICT OF COLUMBIA FUNDS

"GOVERNMENTAL DIRECTION AND SUPPORT
(Rescission)

"Of the funds appropriated for 'Governmental direction and support', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1926), $2,759,000 are rescinded.

"ECONOMIC DEVELOPMENT AND REGULATION
(Rescission)

"Of the funds appropriated for 'Economic development and regulation', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1926), $2,402,700 are rescinded.

"PUBLIC SAFETY AND JUSTICE

"For an additional amount for 'Public safety and justice', $15,026,100.

"PUBLIC EDUCATION SYSTEM
(Rescission)

"Of the funds appropriated for "Public education system', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1927), $1,679,700 are rescinded.

"HUMAN SUPPORT SERVICES

"For an additional amount for 'Human support services', $4,402,700.

"TRANSPORTATION SERVICES AND ASSISTANCE
(Rescission)

"Of the funds appropriated for 'Transportation services and assistance', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1928), $544,600 are rescinded.

"ENVIRONMENTAL SERVICES AND SUPPLY
(Rescission)

"Of the funds appropriated for 'Environmental services and supply', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1928), $5,504,500 are rescinded.

"PERSONAL SERVICES
(Rescission)

"Of the funds appropriated for 'Personal services', for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1929), $17,287,100 are rescinded.

"ENERGY ADJUSTMENT

"For an additional amount for 'Energy adjustment', $2,078,500.

"WASHINGTON CONVENTION CENTER FUND

"For an additional amount for 'Washington Convention Center Fund', $630,700.

"UNALLOCATED GENERAL FUND ADJUSTMENT
(Rescission)

"Of the funds appropriated for the 'General Fund' for the fiscal year ending September 30, 1983, by the District of Columbia Appropriation Act, 1983, approved December 22, 1982 (96 Stat. 1926), $15,183,600 are rescinded.".

Sec. 3. This act shall take effect as provided in section 446 of the District of Columbia Self-Government and Governmental Reorganization Act, approved December 24, 1973

(87 Stat. 801; D.C. Code, sec. 47-304).

Dave Clarke
Chairman
Council of the District of Columbia

M. Barry
Mayor
District of Columbia
APPROVED: June 10, 1983

COUNCIL OF THE DISTRICT OF COLUMBIA
Council Period Five — First Session

RECORD OF OFFICIAL COUNCIL VOTE

DOCKET NO: B 5-184

☐ Item on Consent Calendar

☒ ACTION & DATE: Adopted Final Reading, 6-7-83

☒ VOICE VOTE: By Majority

Recorded vote on request

Absent: all present

☐ ROLL CALL VOTE: — RESULT ______ (___/___/___/___)

COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.
CHMN. CLARKE					MOORE, JR.					SPAULDING				
CRAWFORD					RAY					WILSON				
JARVIS					ROLARK					WINTER				
KANE					SHACKLETON									
MASON					SMITH, JR.									

X — Indicates Vote A.B. — Absent N.V. — Present, not voting

CERTIFICATION RECORD

Russell A. Smith
Secretary to the Council

June 8, 1983
Date

☐ Item on Consent Calendar

☐ ACTION & DATE: ______

☐ VOICE VOTE: ______

Recorded vote on request

Absent: ______

☐ ROLL CALL VOTE: — RESULT ______ (___/___/___/___)

COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.
CHMN. CLARKE					MOORE, JR.					SPAULDING				
CRAWFORD					RAY					WILSON				
JARVIS					ROLARK					WINTER				
KANE					SHACKLETON									
MASON					SMITH, JR.									

X — Indicates Vote A.B. — Absent N.V. — Present, not voting

CERTIFICATION RECORD

______
Secretary to the Council

______
Date

☐ Item on Consent Calendar

☐ ACTION & DATE: ______

☐ VOICE VOTE: ______

Recorded vote on request

Absent: ______

☐ ROLL CALL VOTE: — RESULT ______ (___/___/___/___)

COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.	COUNCIL MEMBER	AYE	NAY	N.V.	A.B.
CHMN. CLARKE					MOORE, JR.					SPAULDING				
CRAWFORD					RAY					WILSON				
JARVIS					ROLARK					WINTER				
KANE					SHACKLETON									
MASON					SMITH, JR.									

X — Indicates Vote A.B. — Absent N.V. — Present, not voting

CERTIFICATION RECORD

______
Secretary to the Council

______
Date

83—[illegible] P

98th Congress, 1st Session - - - - - - - House Document No. 98-73

SUPPLEMENTAL APPROPRIATIONS

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

PROPOSED SUPPLEMENTAL APPROPRIATIONS FOR FISCAL YEAR 1983 AND AMENDMENTS TO THE REQUEST FOR APPROPRIATIONS FOR FISCAL YEAR 1984

JUNE 21, 1983.—Referred to the Committee on Appropriations and ordered to be printed

---

U.S. GOVERNMENT PRINTING OFFICE
11-011 O WASHINGTON : 1983

THE WHITE HOUSE,
Washington, June 20, 1983.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I ask the Congress to consider a request for supplemental appropriations for fiscal year 1983 in the amount of $20,490,000 and amendments to the request for appropriations for fiscal year 1984 in the amount of $430,571,000.

The details of these proposals are set forth in the enclosed letter from the Director of the Office of Management and Budget. I concur with his comments and observations.

Respectfully,

RONALD REAGAN.

Enclosures.

[Estimate No. 10; 98th Congress, 1st Session]

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., June 10, 1983.

The PRESIDENT,
The White House.

SIR: I have the honor to submit for your consideration a request for supplemental appropriations for the fiscal year 1983 in the amount of $20,490,000 and amendments to the request for appropriations for fiscal year 1984 in the amount of $430,571,000.

I have carefully reviewed the proposals contained in this document and am satisfied that these requests are necessary at this time. I recommend, therefore, that these proposals be transmitted to the Congress.

Respectfully,

DAVID A. STOCKMAN,
Director.

Enclosures.

Legislative Branch
Senate
Salaries Officers and Employees

1984 Budget Appendix Page	Heading	1984 Request Pending	1984 Proposed Amendment	1984 Revised Request
I-A1	Conference committees	$912,000	$100,000	$1,012,000
	(In the appropriation language under the above heading delete "$456,000" and insert in lieu there of $506,000).			

This proposal would increase 1984 outlays by $100 thousand.

ENERGY ACTIVITIES

1984 Budget Appendix Page	Heading	1984 Request Pending	1984 Proposed Amendment	1984 Revised Request
I-J15	Nuclear Waste Disposal Fund (In the appropriation language under the above heading delete the period after "Treasury" and insert in lieu thereof the following:)	$306,675,000	$33,500,000	$340,175,0

in an amount not to exceed $340,000,000 to remain available until expended: Provided further, that to the extent that balances in the fund are available in excess of amounts required for obligation, the Secretary is authorized to retire any outstanding obligations to the Secretary of the Treasury as may be appropriate.

This proposal would provide funds to implement certain provisions of the Nuclear Waste Policy Act of 1982. This proposal would increase net 1984 outlays by $22.5 million.

DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS

CONSTRUCTION

For an additional amount for "Construction", $240,000, to remain available until expended: Provided, That such amounts as may be available for various activities associated with implementation of the Southern Arizona Water Rights Settlement Act of 1982, as it applies to the Papago Indian Tribe in Arizona, may be transferred to the Bureau of Reclamation.

PAPAGO TRUST FUND

For deposit into the Papago Trust Fund established pursuant to Public Law 97-293 (96 Stat. 1283), $15,000,000, to remain available until expended.

COOPERATIVE FUND (PAPAGO)

For deposit into the Cooperative Fund established for the benefit of the Papago Tribe of Indians pursuant to section 313, Public Law 97-293 (96 Stat. 1284), $5,250,000, to remain available until expended.

This proposal would provide funds to meet certain requirements of the Southern Arizona Water Rights Settlement Act of 1982. This proposal would increase 1983 outlays by $20.5 million.

DEPARTMENT OF JUSTICE

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
	LEGAL ACTIVITIES			
I-N3	Salaries and expenses, General Legal Activities (In the appropriation language under the above heading, insert of which not to exceed $10,479,000 for litigation support shall remain available until September 30, 1985 immediately after "$166,589,000.")	$160,440,000	$6,149,000	$166,589,000

This amendment would transfer litigating resources from four legal divisions to the U.S. Attorneys; provide staffing and funding for the Civil Division to conduct asbestos litigation and for computer and microfilming support services to screen, abstract, record and utilize asbestos related documentary and evidentiary records; and meet the emergency staffing needs of the U.S. National Central Bureau of INTERPOL. This proposal would increase 1984 outlays by $5.1 million.

I-N5	Antitrust Division, Salaries and expenses	45,791,000	-2,769,000	43,022,000

This amendment reflects a reallocation of resources from the Antitrust Division to the U.S. Attorneys to strengthen the Department's criminal and civil litigation efforts at the local level and respond to the expanded caseload of the U.S. Attorneys. This proposal would reduce 1984 outlays by $2.7 million.

I-N7	U.S. Attorneys and Marshals, Salaries and expenses	362,707,000	18,991,000	381,698,000

The proposed amendment would enable the U.S. Attorneys to expand its litigative efforts through the reallocation of resources from the General Legal Activities and the Antitrust Division appropriations. It would continue the current pilot program of the U.S. Trustees through March 31, 1984 when it is scheduled to terminate under the sunset provision of the Bankruptcy Reform Act of 1978. It would also enable the U.S. Marshals to fund the maintenance and storage costs of assets seized by federal law enforcement organizations and provide the additional staffing required to manage the increasing number of seized property assets. This proposal would increase 1984 outlays by $18.6 million.

I-N9	Community Relations Service, Salaries and expenses (In the appropriation language under the above heading delete "$6,314,000" and insert in lieu thereof the following: $32,969,000 of which $26,655,000 shall remain available until	6,314,000	26,655,000	32,969,000

DEPARTMENT OF JUSTICE

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
	expended to make payments in advance for grants, contracts and reimbursable agreements and other expenses necessary under Section 501(c), of the Refugee Education Assistance Act of 1980, P.L. 96-422, for the processing, care, maintenance, security, transportation and reception and placement in the United States of Cuban and Haitian entrants.)			

The proposed amendment reflects the transfer of the funds and responsibility for the 501(c) Cuban/Haitian entrant related activities from the Immigration and Naturalization Service's Reception, Processing and Care program to the Community Relations Service. This proposal would not affect total outlays.

FEDERAL BUREAU OF INVESTIGATION

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
I-N11	Salaries and expenses	$1,055,690,000	$2,000,000	$1,057,690,000

This proposed amendment would provide for costs associated with the temporary relocation of the FBI's engineering section. This proposal would increase 1984 outlays by $1.9 million.

DRUG ENFORCEMENT ADMINISTRATION

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
I-N13	Salaries and expenses	275,623,000	12,000,000	287,623,000

(In the appropriation language under the above heading delete $275,623,000 and insert in lieu thereof $287,623,000, $10,000,000 of which shall be for purchase of not to exceed five additional aircraft.)

This proposed amendment would provide funds to meet the ongoing requirements of the South Florida Task Force and allow for the purchase of five aircraft above those currently in the base. This proposal would increase 1984 outlays by $11.9 million.

IMMIGRATION AND NATURALIZATION SERVICE

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
I-N15	Salaries and expenses	539,261,000	-26,655,000	512,606,000

(In the appropriation language under the above heading delete "and $26,655,000 for work under Section 501(c) of the Refugee Education Assistance Act.")

DEPARTMENT OF JUSTICE

Budget Appendix Page	Heading	1984 Pending Request	1984 Proposed Amendment	1984 Revised Request
	FEDERAL PRISON SYSTEM			
I-N17	Salaries and expenses	$426,263,000	$2,900,000	$429,163,000

This proposed amendment would provide resources to further expand in 1984 the contract detention program to reduce overcrowding in Federal Prisons. This proposal would increase 1984 outlays by $2.7 million.

	FEDERAL PRISON INDUSTRIES, INC.			
I-N21	Limitation on Administrative and Vocational Expenses, Federal Prison Industries, Incorporated (In the appropriation language under the above heading delete "$2,710,000" and insert in lieu thereof $1,941,000.)		Language	

This proposed amendment reflects the transfer of the financial management, industrial design and quality assurance functions from the limitation on administrative expenses to industry operations. This redesignation of functional responsibility clearly delineates administrative functions of the industry from those required for production. This proposal would not affect 1984 outlays.

	OFFICE OF JUSTICE ASSISTANCE			
I-N23	Salaries and expenses	60,659,000	92,200,000	152,859,000

This proposal would provide funds to establish and operate in 1984 the new criminal justice assistance program. This proposal was included in the 1984 budget as an item to be transmitted at a later date. Estimated 1984 spending of $36.3 million is also included in the 1984 Budget estimate.

ENVIRONMENTAL PROTECTION AGENCY

1984 udget pendix Page	Heading	1984 Request Pending	1984 Proposed Amendment	1984 Revised Request
S1	Salaries and Expenses	$540,389,000	$ 34,500,000	$574,889,000
	(In the appropriation language under the above heading delete "$295,183,000" and insert in lieu thereof $314,028,000.)			
-S2	Research and Development	111,669,000	31,000,000	142,669,000
	(In the appropriation language under the above heading delete "$111,669,000" and insert in lieu thereof $142,669,000.)			
	Abatement, Control and Compliance	293,933,000	100,000,000	393,933,000
	(In the appropriation language under the above heading delete "$283,788,000" and insert in lieu thereof $383,788,000.)			
-S6	Hazardous Substance Response Trust Fund	310,000,000	100,000,000	410,000,000

These amended requests would provide funds for an accelerated program to clean up hazardous waste disposal sites and additional resources for EPA's regulatory, enforcement and research program. These proposals would increase 1984 outlays by $113.5 million.

98th Congress, 1st Session - - - - - - - House Document No. 98–74

1983 ANNUAL REPORT—FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUND

TRANSMITTING

THE 1983 ANNUAL REPORT OF THE BOARD, PURUSANT TO SECTION 201(c) OF THE SOCIAL SECURITY ACT

JUNE 27, 1983.—Referred to the Committee on Ways and Means and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
22–226 O WASHINGTON : 1983

pages tightly bound

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LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Old-Age and Survivors Insurance
and Disability Insurance Trust Funds,
Washington, D.C., June 24, 1983.

The Speaker of the House of Representatives,
Washington, D.C.

Sir: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund (the 43rd such report), in compliance with the provisions of section 201(c) of the Social Security Act.

Respectfully,

Donald T. Regan

Donald T. Regan,
Secretary of the Treasury,
and Managing Trustee of the Trust Funds.

Raymond J. Donovan

Raymond J. Donovan,
Secretary of Labor,
and Trustee.

Margaret M. Heckler

Margaret M. Heckler,
Secretary of Health and Human Services,
and Trustee.

John A. Svahn,
Commissioner of Social Security,
and Secretary, Board of Trustees.

READEX FICHE

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Old-Age and Survivors Insurance
and Disability Insurance Trust Funds,
Washington, D.C., June 24, 1983.

The President of the Senate,
Washington, D.C.

Sir: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund (the 43rd such report), in compliance with the provisions of section 201(c) of the Social Security Act.

Respectfully,

Donald T. Regan

Donald T. Regan,
Secretary of the Treasury,
and Managing Trustee of the Trust Funds.

Raymond J. Donovan

Raymond J. Donovan,
Secretary of Labor,
and Trustee.

Margaret M. Heckler

Margaret M. Heckler,
Secretary of Health and Human Services,
and Trustee.

John A. Svahn,
Commissioner of Social Security,
and Secretary, Board of Trustees.

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1983 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND AND THE FEDERAL DISABILITY INSURANCE TRUST FUND

I. THE BOARD OF TRUSTEES

The Federal Old-Age and Survivors Insurance Trust Fund, established on January 1, 1940, and the Federal Disability Insurance Trust Fund, established on August 1, 1956, are held by the Board of Trustees under the authority of section 201(c) of the Social Security Act. Currently, the Board has three members, who serve in an ex officio capacity. These members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983) provide for the addition of two public members to the Board of Trustees. The two new members are to be nominated by the President for a term of 4 years, and are subject to confirmation by the Senate.

By law, the Secretary of the Treasury is designated as the Managing Trustee and the Commissioner of Social Security is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust funds, in compliance with section 201(c)(2) of the Social Security Act. This report, the 43rd such report, is the annual report for 1983.

II. HIGHLIGHTS

This section summarizes the more important developments since the 1982 Annual Report was issued on April 1, 1982, and describes the major features of this year's report. These topics are discussed in more detail in later sections.

Financial status of the trust funds

As a result of the enactment of the Social Security Amendments of 1983, the estimates in this report indicate that the Old-Age, Survivors, and Disability Insurance program will be able to pay benefits on time for the next 75 years under all but the most pessimistic of the various sets of assumptions for which estimates are shown. Under the pessimistic assumptions, the estimates indicate that OASDI benefits can be paid on time through the second decade of the next century. The financial outlook shown in this report for the OASDI program is therefore dramatically improved as compared to that shown in the last annual report. The 1982 Annual Report indicated that interfund loans to the Old-Age and Survivors Insurance Trust Fund from the Disability Insurance and Hospital Insurance Trust Funds would be required in the second half of 1982, and that by July 1983 OASI benefits could not be paid on time, in the absence of corrective legislation. The 1982 Annual Report also showed a long-range actuarial deficit of 1.82 percent of taxable payroll under the intermediate II-B set of assumptions over 75 years. That average deficit consisted of an average surplus of 0.64 percent of taxable payroll over the first 25-year subperiod, and average deficits of 1.68 and 4.41 percent over the second and third 25-year subperiods, respectively.

In November 1982, the first interfund loan was made to the OASI Trust Fund under the limited authority granted by Public Law 97-123. In December, more interfund loans were made. In total, $17.5 billion was borrowed—$5.1 billion from the DI Trust Fund, and $12.4 billion from the HI Trust Fund. As stated by the Trustees in the 1982 Annual Report, without such loans, OASI benefits could not have been paid on time beginning in November 1982. Even with such loans, benefits could not have been paid on time after June 1983, without corrective legislation.

The National Commission on Social Security Reform, which had been established by the President on December 16, 1981, issued its report on January 20, 1983. The Commission's recommendations formed the basis of two similar bills that were introduced in the Congress as H.R. 1900 in the House of Representatives and S. 1 in the Senate. The Conference Committee agreement on the House and Senate bills was passed by both Houses of the Congress on March 24. President Reagan signed the Social Security Amendments of 1983 into law (Public Law 98-21) on April 20, 1983.

The improved financial status of the OASDI program is achieved through the increases in income and decreases in outgo that will result from the 1983 amendments. For the first time in 3 years, the short-range projections in the annual report indicate that OASI and DI benefits will be paid on time in the short range and for many years thereafter. For the first time in a decade, the current intermediate projections indicate a 75-

year actuarial balance between income and outgo, on the basis of the alternative II-B assumptions. This average balance consists of average surpluses of 1.83 and 0.32 percent of taxable payroll over the first and second 25-year subperiods, respectively, and an average deficit of 2.08 percent over the third 25-year subperiod. Thus, the actuarial balance is a moving average, and continuing review of the financing of the OASDI program is necessary.

Four sets of financial projections are shown in this report, to indicate future income and outgo under a broad range of conditions which are described in the section entitled "Economic and Demographic Assumptions." As in recent annual reports, one set of assumptions is designated as "optimistic" and another is termed "pessimistic." The particular economic and demographic assumptions in each set are so characterized depending on whether they have a favorable or unfavorable effect on the financial status of the trust funds. Two alternative "intermediate" sets of assumptions are used: alternative II-A and alternative II-B. These intermediate sets share the same demographic assumptions. However, alternative II-A assumes future economic performance resembling that of the more robust recent economic expansions; alternative II-B assumes economic performance resembling less robust economic expansions. This presentation illustrates the beneficial effect on the financial status of the trust funds of higher real growth in wages, higher employment, and lower inflation for any given set of demographic assumptions. Under the "pessimistic" assumptions, the economy is assumed to experience a delayed recovery from the recent recession, and slow but steady growth thereafter. As such, this set of assumptions represents a fairly adverse economic situation but not the worst conditions that could occur.

The operating deficits that began in 1975 reduced the assets of the OASI and DI Trust Funds to very low levels at the beginning of 1983. Certain provisions of the 1983 amendments will result in substantial immediate increases in those assets, but the rate of growth in 1984-87 is expected to be relatively small. As a result, the estimated trust-fund levels shown in this report are relatively low through 1987. Thus, although the OASDI program is estimated to be financially sound for many years into the future based on the assumptions in this report, the solvency of the program cannot be guaranteed under all circumstances. If actual economic conditions in 1984-87 are, on the average, worse (in regard to the effect on OASDI financing) than those assumed under alternative III, the OASDI program could again experience financial difficulties.

The financial projections are described in detail for three time periods of particular interest—short range, medium range, and long range. The estimates for the various time periods can be summarized as follows:

(a) Short range (1983-87)—Under the alternative II-A and II-B assumptions, expenditures from the OASI Trust Fund are expected to slightly exceed income in 1983; during 1984-87, income is expected to exceed expenditures in each year. Under the more optimistic alternative I assumptions, income exceeds expenditures in every year. Under the less favorable alternative III assumptions, OASI expenditures would exceed income in both 1983 and 1984; the reverse situation would occur in 1985-87.

The excess of income over expenditures in the mid-1980's is expected to result in a gradual increase in the assets of the OASI Trust Fund. Under the first three alternatives, these increases would be sufficient to trigger the automatic interfund loan repayment provisions included in the 1983 amendments. Thus, during 1984-87 the OASI Trust Fund would begin to repay the amounts borrowed in 1982 from the HI Trust Fund. Only under the optimistic alternative I assumptions would full repayment of such loans be required by the end of 1987 under the automatic provisions; under alternatives II-A and II-B, the repayments to HI would not be required to be completed until 1988. Under the alternative III assumptions, no repayment of the HI loans would be required by law prior to 1988. The alternative III estimates shown in this report, however, assume full repayment in 1987. Without such repayment, as indicated in the concurrent 1983 Annual Report for the Hospital Insurance program, the HI Trust Fund would be depleted in 1987 under the alternative III assumptions.

Under all four sets of assumptions, the OASI Trust Fund would have sufficient assets to permit timely payment of benefits throughout this period. The level of assets relative to annual expenditures, however, would remain relatively low through about 1987, making the fund vulnerable to any severe economic downturn during this period. The short-range financial status of the DI Trust Fund is generally similar to that of the OASI Trust Fund. This represents a marked decline as compared with the status shown for the DI Trust Fund in the 1982 Annual Report. The change is attributable primarily to a reallocation of the OASDI payroll-tax rate between the two trust funds. This reallocation was included in the 1983 amendments in order to place the two funds in a similar financial position.

As noted in the concurrent 1983 Annual Report for the Hospital Insurance Trust Fund, under all but the optimistic set of assumptions, HI assets are expected to continue to decline relative to HI annual expenditures and the trust fund would be depleted by about the end of this decade without corrective legislation. The projection of the HI Trust Fund, and of the OASI, DI, and HI Trust Funds combined, are summarized in Appendix F. While the OASI and DI Trust Funds would have sufficient assets to permit loans to the HI Trust Fund, and prevent the HI fund's depletion within the next 10 years (under all four sets of assumptions), interfund loans are now permitted only through 1987, and any loans outstanding at the beginning of 1988 must be repaid within 2 years. Thus, the expected depletion of the HI Trust Fund could not be prevented or delayed through use of the present interfund borrowing provisions.

(b) Medium range (1983-2007)—Under the four alternative sets of assumptions, average annual costs for the OASDI program during the 25-year projection period range from 9.22 to 11.44 percent of taxable payroll, while average income ranges from

12.45 to 12.53 percent. Thus, the projected medium-range actuarial balance is a surplus varying from 3.23 to 1.08 percent of taxable payroll. As shown in Appendix F, the medium-range actuarial balance for the combined OASI, DI, and HI programs is a surplus of 1.37 percent of taxable payroll under alternative II-A and 0.68 percent under alternative II-B.

(c) Long range (1983-2057)—Over the 75-year period, annual costs for the OASDI program are projected to average from 9.81 to 16.56 percent of taxable payroll, depending on the assumptions. During this period, average income ranges from 12.73 to 13.04 percent of taxable payroll. Thus, the projected long-range actuarial balance varies from a surplus of 2.92 percent of taxable payroll under the optimistic alternative I assumptions to a deficit of 3.51 percent of taxable payroll under the pessimistic alternative III assumptions. Under alternatives II-A and II-B, respectively, average surpluses of 0.84 and 0.02 percent of taxable payroll are projected. As shown in Appendix F, the long-range actuarial balance for the combined OASI, DI, and HI programs is a deficit of 3.88 percent of taxable payroll under alternative II-B. This deficit consists of an average surplus of 0.68 percent of taxable payroll over the first 25-year subperiod, and average deficits of 3.86 and 8.47 percent over the second and third 25-year subperiods, respectively.

Such 75-year projections are subject to considerable uncertainty and should be interpreted, not as precise forecasts of expected program operations, but as indications of how the trust funds would operate under present law if the assumed economic and demographic conditions actually materialize. Despite their inherent uncertainty, these projections, and the patterns of surpluses and deficits that they reveal in the various subperiods, provide a valuable picture of the long-range financial obligations of the Social Security program and information on how program costs would respond to changing conditions.

Trust fund operations during fiscal year 1982

(a) The total assets of the OASI and DI Trust Funds declined by $7.9 billion during fiscal year 1982, to $19.3 billion on September 30, 1982. Income amounted to $148.0 billion and expenditures totaled $156.0 billion. Disbursements from the OASI Trust Fund exceeded income by $11.3 billion, and the assets of the OASI Trust Fund declined to $12.5 billion by the end of the fiscal year. The assets of the DI Trust Fund increased by $3.4 billion, to $6.8 billion on September 30, 1982.

(b) The total number of persons receiving monthly benefits under the OASDI program was 35.6 million at the end of September 1982. An estimated 115 million workers had earnings in calendar year 1982 that were taxable and creditable toward benefits under the program.

(c) The trust funds earned interest amounting to $2.1 billion during fiscal year 1982. The effective annual rate of interest earned by the combined assets of the OASI and DI Trust Funds during the

12 months that ended June 30, 1982 was 10.3 percent. During this same period, the average interest rate on new securities purchased by the trust funds was 13.8 percent.

(d) Administrative expenses for the OASDI program in fiscal year 1982 were $2.0 billion, which represented 1.3 percent of total benefit payments made during the year.

Developments since the last annual report

(a) An automatic cost-of-living benefit increase of 7.4 percent became effective for June 1982. (The statement announcing the determination of this increase is shown in Appendix C.) An increase of 3.5 percent will become effective for December 1983, as recently determined and announced.

(b) Effective for 1983, the contribution and benefit base was increased from $32,400 to $35,700. The annual exempt amount under the retirement earnings test was increased from $6,000 to $6,600 for beneficiaries aged 65 through 69, and from $4,440 to $4,920 for beneficiaries under age 65. Beginning in 1983, the retirement earnings test does not apply to beneficiaries aged 70 and over; prior to 1983, the test was not applicable at ages 72 and over. The amount of annual earnings required for a quarter of coverage was increased from $340 to $370. (The statement announcing these changes is shown in Appendix D.)

III. NATIONAL COMMISSION ON SOCIAL SECURITY REFORM

On December 16, 1981, the President established the National Commission on Social Security Reform (by Executive Order 12335). The Commission consisted of 15 members—five selected by the President, five by the Majority Leader of the Senate, and five by the Speaker of the House of Representatives. The Commission presented its final report to the President on January 20, 1983. The report included numerous recommendations designed to alleviate the short-range and long-range financial problems of the OASDI program. The recommendations in the Commission's "consensus package" formed the basis of the Social Security Amendments of 1983 (Public Law 98-21), although several of the proposals were modified somewhat. The key provisions of the new legislation are summarized in the next section.

IV. SOCIAL SECURITY AMENDMENTS SINCE THE 1982 REPORT

Since the 1982 Annual Report was transmitted on April 1, 1982, several laws affecting the OASDI program have been enacted. The legislative changes having a significant effect on the financial status of the program are described below.

The Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248, enacted into law on September 3, 1982) modified the Medicare program in several significant ways (including the coverage, under the HI program, of the earnings of all Federal civilian employees, beginning January 1, 1983) but made only the following changes in the OASDI program:

1. Some independent contractors, including real estate agents and certain other direct sellers, had been classified as employees for Social Security tax purposes. The new law reclassifies them as self-employed persons.
2. The law improves the reporting of tip income for income tax and Social Security tax purposes.

Public Law 97-455 (enacted January 12, 1983) included the following significant modifications to the OASDI program, most of which involved disability benefits:

1. The law provides for the continued payment of disability benefits during the appeals process, in certain situations following a decision to terminate such benefits. Under previous law, benefits ended with the second month following the month of termination. Under the new law, such benefits can be continued, at the option of the beneficiary, through the earliest of (a) the month preceding the month in which a decision on the appeal is rendered by an Administrative Law Judge, (b) the month preceding the month in which no request for a hearing by an ALJ is pending, or (c) June 1984. If the decision by the ALJ supports the initial decision to terminate the benefits, any payments received under this provision are overpayments and subject to recovery. This temporary provision applies only to termination determinations which are made before October 1, 1983.
2. The Secretary of Health and Human Services is granted authority to waive, on a State-by-State basis, the statutory requirements for periodic reviews of the continued eligibility of disabled beneficiaries.
3. The law requires that an opportunity for a face-to-face hearing be provided, beginning no later than January 1, 1984, at the first appeal stage (the reconsideration level) for appeals of decisions to terminate disability benefits.
4. The law modified and extended the exception to the offset of Social Security auxiliary and survivor benefits for persons who also receive governmental pensions based on noncovered employment (this provision was further modified by subsequent legislation).

The most significant legislation since the issuance of the 1982 Annual Report was the Social Security Amendments of 1983 (Public Law 98-21, enacted April 20, 1983). From an actuarial cost standpoint, the important provisions of this law are the following:

1. *Coverage of newly hired Federal employees*
   Compulsory coverage under the OASDI program will be provided for Federal civilian employees of the executive, legislative, and judicial branches hired after 1983. (Beginning January 1, 1983, coverage under the HI program had already been provided for all Federal civilian employees, including those hired before 1983, under the Tax Equity and Fiscal Responsibility Act of 1982. Military service has been covered under the OASDI program since 1957 and under the HI program since 1966.) Compulsory coverage will also be provided for Federal hires with previous periods of Federal service provided that the break in service exceeded 365 days. Compulsory coverage will be provided for current employees of the legislative branch who are not participating in the Civil Service Retirement System as of December 3l, 1983; for all Members of Congress; for the President and the Vice-President; for Federal judges; and for most high-level political appointees in the executive branch. The retirement pay of retired Federal judges is also covered for periods in which judicial duties are performed.
2. *Coverage of employees of nonprofit organizations*
   The earnings of all current and future employees of private tax-exempt nonprofit organizations will be covered after 1983. Under prior law, work performed for such organizations was excluded from coverage unless the organization waived its exemption from Social Security taxation. Employees affected by this provision will be deemed to be fully insured for Social Security benefits if the following conditions are met:
   (a) On January 1, 1984, the employee is age 55 or older and is employed by a nonprofit organization to which coverage is extended solely as a result of Public Law 98-21, and
   (b) The employee acquires after December 31, 1983, a specified number of quarters of coverage which depends on the employee's age, as follows:

Age on January 1, 1984	Quarters of coverage required
60 or over	6
59	8
58	12
57	16
55 or 56	20

   In addition, the new law provides that Social Security coverage for employees of nonprofit organizations may not be terminated on or after March 31, 1983.

3. ***Prohibited termination of coverage of State and local government employees***
   The new law prohibits States from terminating coverage of State and local government entities if the termination had not become effective before the date of enactment (April 20, 1983).

4. *Six-month delay in cost-of-living adjustment*
The effective month for automatic cost-of-living increases in OASDI benefits is changed from June to December of each year, beginning in 1983. The period over which the increase in the Consumer Price Index (CPI) is measured to determine the benefit increase for December 1983 is unchanged from previous law (the period is from the first quarter of 1982 through the first quarter of 1983). However, the benefit increases in 1984 and later years will be based on the CPI increase from the third quarter of the previous year through the third quarter of the year in which the benefit increase becomes effective.

5. *Modification of cost-of-living increases during periods of low trust fund balances (stabilizer provision)*
If the combined assets of the OASI and DI Trust Funds, as a percentage of estimated annual expenditures, fall below a specified level, automatic benefit increases will be limited to the lower of the increases in wages or prices. This specified level is 15 percent for benefit increases in 1984 through 1988, and 20 percent for benefit increases in 1989 and later. If assets, excluding amounts borrowed from the HI Trust Fund, fall below that level, the automatic benefit increase will be the smaller of (1) the increase in prices as measured by the CPI (the same benefit increase that would apply if the level of trust fund assets were not below the specified levels of 15 percent or 20 percent), or (2) the increase in average wages in the previous year as compared with the second preceding year—which is used for purposes of adjustments in the contribution and benefit base and in other wage-indexed program amounts.

The new law also provides for "catch-up" benefit increases for those beneficiaries whose benefit increases were reduced as a result of this provision. Specifically, when the assets of the combined OASI and DI Trust Funds, excluding borrowed amounts, exceed 32 percent of estimated annual expenditures, additional increases in benefits are provided, to the extent that funds are available above the 32-percent trust fund level, until benefits are increased to the level at which they would have been if all increases had been based on CPI increases.

6. *"Normalized" tax transfers*
The new law provides that the estimated amount of Social Security taxes to be received each month shall be transferred from the general fund of the Treasury to the trust funds on the first day of the month, instead of on a daily basis as taxes are collected. This provision, which essentially allows short-term loans by the general fund to the trust funds, requires that the trust funds pay interest on such advance tax transfers. The net effect is to make funds available when needed to pay benefits, which are normally paid on the third of each month. The effects of this provision are discussed in later sections.

7. *Interfund borrowing reinstatement*
The new law reinstates the interfund borrowing authority that

expired at the end of 1982 and extends it through the end of 1987. The new law also adds certain requirements as to when loans can be made, when they must be repaid, and when interest must be paid. The effects of this provision are discussed in later sections.

8. *Elimination of windfall benefits for persons receiving pensions from noncovered employment*

The computation of OASDI benefits will be modified for most workers (with certain exceptions) who first become eligible after 1985 for both a pension based wholly or in part on noncovered employment and a retired- or disabled-worker's benefit under Social Security. The modification replaces the 90-percent factor generally applied to average indexed earnings in the first band of the benefit formula by a factor of 40 percent, after a phase-in period of 5 years (1986-90).

As an exception, the benefits for workers with 30 or more years of coverage (as defined for purposes of the special minimum benefit under the Social Security Act) will not be affected. For workers with 26, 27, 28, or 29 years of coverage, instead of 40 percent, the first factor of the benefit formula will be 50, 60, 70, or 80 percent, respectively.

The reduction in the Social Security benefit which results from this provision may not exceed one-half of the pro-rata portion of the pension which is attributable to noncovered employment after 1956.

Certain groups are exempted from the effects of this provision, as follows:

(a) Workers who are compulsorily covered on January 1, 1984, as a result of the new law. These include the small number of current Federal employees and all nonprofit employees covered solely because of the new law except those whose past employment for a nonprofit organization had been covered, but whose employment for that organization was not covered on December 31, 1983.

(b) Employees whose only pension based on noncovered employment is a Railroad Retirement pension.

9. *Increase in normal retirement age*

The normal retirement age (i.e., the earliest age at which unreduced retirement benefits can be received) will be gradually increased from age 65 to age 67. For persons attaining age 62 in 2000, the normal retirement age will be increased by 2 months—to age 65 and 2 months. In each succeeding year, the normal retirement age will be increased by 2 additional months until it reaches age 66 for persons attaining age 62 in 2005. The normal retirement age will then remain at age 66 for persons attaining age 62 through 2016. Beginning with persons attaining age 62 in 2017, the normal retirement age will again increase by 2 months each year, until it reaches age 67 for persons attaining age 62 in 2022 and later.

The minimum age of eligibility for reduced benefits will remain unchanged at age 62 (age 60 for widows and widowers). However, when the normal retirement age begins to increase, there will be corresponding increases in the amount of reduction for early retirement. The amount of reduction will be 5/9 of 1 percent for each of the first 36 months of early retirement (as under present law), and 5/12 of 1 percent for each month in excess of 36. Thus, for persons attaining age 62 during 2005-2016, for whom the normal retirement age will be 66, the reduced benefit payable at age 62 will be 75 percent of the PIA. For persons attaining age 62 in 2022 and later, for whom the normal retirement age will be 67, the reduced benefit payable at age 62 will be 70 percent of the PIA.

10. *Increase in delayed retirement credits*

Beginning with workers who attain age 65 in 1990, the increment for delaying retirement past the normal retirement age will increase by ½ of 1 percent every second year, from 3 percent per year of delayed retirement for workers attaining age 65 in 1982-89, until reaching 8 percent per year of delayed retirement for workers attaining normal retirement age (age 66) after 2008.

11. *Reduced withholding rate under the retirement earnings test*

Beginning in 1990, the benefit withholding rate under the retirement earnings test will be reduced from $1 for each $2 of earnings over the annual exempt amount to $1 for each $3 of excess earnings, for beneficiaries who have reached the normal retirement age (age 65 in 1990-99). When the normal retirement age begins to increase in 2000, the age at which the reduced withholding rate will apply will also increase.

12. *Taxation of Social Security benefits*

Beginning in 1984, as much as one-half of OASDI benefits (and railroad retirement tier 1 benefits) will be included in taxable income for taxpayers with incomes above certain base amounts. The sum of a taxpayer's (1) adjusted gross income, (2) tax-free interest income, and (3) one-half of OASDI benefits will be compared to a base amount of $25,000 for a single taxpayer, or $32,000 for a married couple filing a joint tax return. If the sum exceeds the base amount, the amount of benefits to be included in taxable income will be the lesser of:

(a) one-half of the excess of such sum over the base amount, or

(b) one-half of the amount of benefits received.

The revenue raised by this taxation of benefits will be automatically transferred to the OASI and DI Trust Funds.

The new law does not provide for indexing of the base amounts of $25,000 and $32,000. These amounts are, therefore, scheduled to remain the same in all future years.

13. *Changes in tax rate schedule*

The OASDI tax-rate increase scheduled for 1985 is advanced to 1984, and part of the increase scheduled for 1990 is advanced to

1988. Both the OASDI and HI tax rates on self-employment income are increased by making them equal to the corresponding combined rates for employees and employers, beginning in 1984.

For 1984 only, a tax credit of 0.3 percent of taxable wages (equal to the 1984 tax-rate increase for employees) will be allowed against the taxes paid by employees. Similarly, tax credits of 2.7 percent, 2.3 percent, and 2.0 percent will be allowed against taxes on self-employment income in 1984, 1985, and 1986-89, respectively.

Beginning in 1990, self-employed persons will be allowed to deduct from their net earnings from self-employment an amount equal to such income multiplied by one-half of the Social Security tax rate for the self-employed. The result will be multiplied by the entire tax rate for the self-employed, and that product will be the Social Security tax liability for the year (with the usual limitations imposed by the annual earnings base). Half of the Social Security tax liability will be deductible in computing Federal income taxes for the self-employed. The effect of this procedure will be to place self-employed persons in roughly the same position as employees in regard to their Social Security and Federal income taxes.

The allocation of the total OASDI tax rate between the OASI and DI Trust Funds is also modified by the new law.

14. *Acceleration of State and local tax collections*

The new law requires that, after 1983, the Social Security taxes due on the wages of employees of State and local government entities be deposited semi-monthly, within 15 days after the end of each 15-day period, rather than 30 days after the end of each month, as under previous law.

15. *Increase in benefits for certain surviving, divorced, and disabled spouses*

Four provisions of the new law will increase benefits payable to certain surviving, divorced, and disabled spouses. Most of the affected beneficiaries, present and future, are women.

The first provision will allow the continuation of benefits for disabled and surviving divorced spouses who remarry after becoming eligible for benefits. This provision is effective for benefits payable after 1983.

The second provision will change the indexing procedures used to calculate deferred benefits for surviving spouses of workers who die before attaining age 62. Under previous law, the earnings histories of such workers were indexed by wage increases to the second year preceding the year of death. Beginning with the year of death, benefits were indexed by increases in the CPI. The new law provides for wage indexing through the year in which the worker would have reached age 60, or 2 years before the survivor's eligibility for benefits, if earlier, whenever such indexing produces a larger monthly benefit amount. This provision is effective for newly eligible survivors after 1984.

The third provision will provide entitlement to benefits, after 1984, for divorced spouses when the former spouse is not receiving benefits. Under previous law, the former spouse on whose earnings record the benefits were payable had to claim benefits before his or her divorced spouse could claim benefits. Also, under previous law, if the former spouse claimed benefits but continued to work, the divorced spouse could have benefits withheld because of the retirement earnings test. The new law essentially permits independent entitlement.

The fourth provision will increase the benefits, after 1983, for any person who is or ever was entitled to benefits before age 60 as a disabled widow or widower. Previous law required that the initial benefits of such persons would vary from 50 to 71.5 percent of the primary insurance amount for ages at entitlement ranging from 50 to 60. The new law will provide a 71.5-percent benefit rate for all such beneficiaries.

16. *Modification to financing basis of noncontributory military service wage credits*

The new law changes the financing basis of noncontributory military service wage credits under the Social Security Act. These deemed wage credits generally had been financed through reimbursements by the general fund of the Treasury for the additional benefit payments and administrative expenses attributable to such wage credits, with adjustments for interest.

Under the new law, the additional past and future costs attributable to wage credits for military service before 1957, less the accumulated value of past reimbursements, was paid in a lump-sum transfer on May 20, 1983. For the deemed wage credits based on military service in 1957-83, a similar lump-sum transfer was made on the same date to reflect the differences, accumulated with interest, between what was actually paid in the past and what would have been paid if such deemed wage credits had been taxed at the combined employee-employer rate. For deemed wage credits based on military service after 1983, a transfer will be made on July 1 of each year in an amount equal to what would have been paid if such deemed wages in the year were taxed at the combined employee-employer rate.

17. *Reimbursements for unnegotiated checks*

The new law will provide reimbursement to the Social Security trust funds for all past and future benefit checks that remain uncashed 6 months after being issued. Under previous law, the total amount for all checks issued was deducted from the trust funds, and such unnegotiated checks were never reimbursed.

18. *Modification of public pension offset*

The new law provides that any person becoming eligible after June 1983 for both a pension based on noncovered governmental employment and a Social Security benefit as a spouse or widow(er) will have that Social Security benefit reduced by two-thirds of the amount of the noncovered pension. Previous law provided for offset by the entire pension amount.

19. *Taxation of contributions under certain salary reduction plans*
    The new law requires that employer contributions to salary reduction plans under Internal Revenue Code sections 401(k) and 403(b), and to certain nonqualified deferred compensation arrangements, will be taxable for Social Security purposes. The income-tax treatment of these contributions will not be affected. The provision is effective for contributions made after 1983.

20. *Suspension of benefits to certain nonresident aliens*
    The new law will suspend benefit payments to any nonresident alien receiving benefits or applying to receive them as an auxiliary or survivor beneficiary of an insured worker (whether or not the worker is a U.S. citizen), whenever such alien has been outside the United States for 6 consecutive calendar months. Alien auxiliary or survivor beneficiaries who can prove that they had lived in the United States for a total of at least 5 years during which their relationship with the insured worker was the same as the one on which eligibility for benefits is based would be exempt from this provision. The provision is effective with respect to any individual who becomes eligible for benefits after 1984.

21. *Expanded use of death certificates*
    The new law provides authority for the Secretary of Health and Human Services to contract with the States for death certificate information. This information will be used to prevent the erroneous payment of benefits to deceased individuals.

22. *Other changes*
    The new law includes many other provisions which do not have a significant impact from an actuarial cost standpoint on the OASDI program. Some of these provisions made minor or technical modifications to the Social Security Act, some require studies to be performed, and some affect such a small number of beneficiaries that the cost effect is negligible.

Details of these amendments can be found in documents prepared by and for the Congress. In particular, estimates of the financial effects of the new provisions are available in these documents. The financial projections shown in this report include the effects of these amendments.

V. NATURE OF THE TRUST FUNDS

The Federal Old-Age and Survivors Insurance Trust Fund was established on January 1, 1940, as a separate account in the United States Treasury. All the financial operations of the OASI program are handled through this fund. The Federal Disability Insurance Trust Fund is another separate account in the United States Treasury; it was established on August 1, 1956. All the financial operations of the DI program are handled through this fund.

The major sources of receipts of these two funds are (1) amounts appropriated to each of them under permanent authority on the basis of contributions paid by workers and their employers, and by individuals with self-employment income, in work covered by the OASDI program, and (2) amounts deposited in each of them representing contributions paid by or on behalf of workers employed by State and local governments and by such employers with respect to wages covered by the program. All employees, and their employers, in employment covered by the program are required to pay contributions with respect to their wages. Employees are required to pay contributions with respect to cash tips, but employers are required to pay contributions on only that part of tip income deemed to be wages under the Federal minimum wage law. All covered self-employed persons are required to pay contributions with respect to their covered self-employment income.

In general, an individual's contributions are computed on annual wages or self-employment income, or both wages and self-employment income combined, up to a specified maximum annual amount. The contributions are determined first on the wages and then on any self-employment income within the annual maximum amount. An employee who pays contributions on wages in excess of the annual maximum amount (because of employment with two or more employers) is eligible for a refund of the excess employee contributions. The amount of benefits to which an individual (or his or her spouse and children) may become entitled under the OASDI program is based on the individual's taxable earnings over his or her lifetime. In computing benefits for almost all persons who first become eligible to receive benefits in 1979 or later, the earnings in each year are indexed to take account of increases in average wage levels. The maximum amount of earnings taxable in a year is also the maximum amount of earnings creditable toward benefits in that year (the contribution and benefit base).

The contribution rates applicable to taxable earnings in each calendar year, and the allocation of the rates between the two trust funds, are shown in table 1. For 1984 and later, the rates shown are those scheduled in present law (including the effects of Public Law 98-21). The contribution and benefit bases are also shown in table 1. The bases for 1975-78 were determined under the automatic-increase provisions in section 230 of the Social Security Act. The bases for 1979-81 were specified in the law, as amended in 1977. The bases for 1982-83 were again determined under the automatic-increase provisions, as will be the bases in 1984 and later.

TABLE 1.—CONTRIBUTION AND BENEFIT BASE AND CONTRIBUTION RATES

Calendar years	Contribution and benefit base	Contribution rates (percent of taxable earnings)					
		Employees and employers, each			Self-employed		
		OASDI	OASI	DI	OASDI	OASI	DI
1937-49	$3,000	1.000	1.000	—	—	—	—
1950	3,000	1.500	1.500	—	—	—	—
1951-53	3,600	1.500	1.500	—	2.2500	2.2500	—
1954	3,600	2.000	2.000	—	3.0000	3.0000	—
1955-56	4,200	2.000	2.000	—	3.0000	3.0000	—
1957-58	4,200	2.250	2.000	0.250	3.3750	3.0000	0.3750
1959	4,800	2.500	2.250	.250	3.7500	3.3750	.3750
1960-61	4,800	3.000	2.750	.250	4.5000	4.1250	.3750
1962	4,800	3.125	2.875	.250	4.7000	4.3250	.3750
1963-65	4,800	3.625	3.375	.250	5.4000	5.0250	.3750
1966	6,600	3.850	3.500	.350	5.8000	5.2750	.5250
1967	6,600	3.900	3.550	.350	5.9000	5.3750	.5250
1968	7,800	3.800	3.325	.475	5.8000	5.0875	.7125
1969	7,800	4.200	3.725	.475	6.3000	5.5875	.7125
1970	7,800	4.200	3.650	.550	6.3000	5.4750	.8250
1971	7,800	4.600	4.050	.550	6.9000	6.0750	.8250
1972	9,000	4.600	4.050	.550	6.9000	6.0750	.8250
1973	10,800	4.850	4.300	.550	7.0000	6.2050	.7950
1974	13,200	4.950	4.375	.575	7.0000	6.1850	.8150
1975	14,100	4.950	4.375	.575	7.0000	6.1850	.8150
1976	15,300	4.950	4.375	.575	7.0000	6.1850	.8150
1977	16,500	4.950	4.375	.575	7.0000	6.1850	.8150
1978	17,700	5.050	4.275	.775	7.1000	6.0100	1.0900
1979	22,900	5.080	4.330	.750	7.0500	6.0100	1.0400
1980	25,900	5.080	4.520	.560	7.0500	6.2725	.7775
1981	29,700	5.350	4.700	.650	8.0000	7.0250	.9750
1982	32,400	5.400	4.575	.825	8.0500	6.8125	1.2375
1983	35,700	5.400	4.775	.625	8.0500	7.1125	.9375
Rates scheduled in present law:							
1984-87	[1]	5.700	5.200	.500	11.4000	10.4000	1.0000
1988-89	[1]	6.060	5.530	.530	12.1200	11.0600	1.0600
1990-99	[1]	6.200	5.600	.600	12.4000	11.2000	1.2000
2000 and later	[1]	6.200	5.490	.710	12.4000	10.9800	1.4200

[1] Subject to automatic increase.

All contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury as internal revenue collections, except for amounts received under State agreements (to effectuate coverage under the program for State and local government employees), which are deposited directly in the trust funds. The internal revenue collections are automatically appropriated to the trust funds on an estimated basis. The exact amount of contributions received is not known initially because contributions under the OASDI and HI programs and individual income taxes are not separately identified in collection reports received by the Department of the Treasury. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable as determined from reported earnings. Adjustments are also made to account for any refunds to employees (with more than one employer) who paid contributions on wages in excess of the contribution and benefit base.

Prior to May 1983, the internal revenue collections were transferred to the trust funds immediately upon receipt. In May 1983 and later, estimated total collections for each month are credited to the trust funds on the first day of the month. As the actual collections are received during the month, they are deposited in the general fund of the Treasury and remain there. The trust funds pay interest to the general fund to reimburse it for the interest lost because of this provision.

Beginning in 1984, OASDI benefits will be subject to Federal income taxes under certain circumstances. The proceeds from this taxation of benefits will be transferred to the trust funds, in advance, on an estimated basis, at the beginning of each calendar quarter, with no reimbursement to the general fund for interest lost as a result of the advance transfers. Subsequent adjustments will be made based on the actual amounts as shown on annual income tax records. The amounts appropriated from the general fund of the Treasury will be allocated to the OASI and DI Trust Funds on the basis of the additional taxes paid on the benefits from each fund.

Another source of income to the trust funds is interest received on investments held by the trust funds. That portion of each trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested, on a daily basis, in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust funds. The Act provides that these obligations shall bear interest at a rate equal to the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States then forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

The income and expenditures of the trust funds are also affected by the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the Railroad Retirement program and the OASDI program. Under these provisions, transfers between the Railroad Retirement Account and the trust funds are made on an annual basis in order to place each trust fund in the same position as it would have been if railroad employment had always been covered under OASDI.

Several other provisions in the Social Security Act also affect the income and expenditures of the trust funds. Income is affected by provisions for (1) payments from the general fund of the Treasury to the OASI and DI Trust Funds for any cost arising from the granting of noncontributory wage credits for military service prior to 1957, according to periodic determinations made by the Secretary of Health and Human Services; (2) annual transfers from the general fund of the

Treasury representing the amount of contributions that would have been paid on noncontributory wage credits for military service after 1956, if such credits had been treated as covered earnings; (3) annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for any costs arising from the special monthly cash payments to certain persons who reached age 72 before 1968 and who generally are not eligible for cash benefits under other provisions of the OASDI program; (4) the receipt of unconditional money gifts or bequests made for the benefit of the trust funds or any activity financed through the funds; and (5) amounts charged to private employee benefit plans for providing the plans with detailed earnings information. In addition to the payment of benefits from the trust funds, the following expenditures are authorized: (1) costs of vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability where such services contributed to their successful rehabilitation; (2) expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in carrying out the provisions of title II of the Social Security Act and the provisions of the Internal Revenue Code relating to the collection of contributions; and (3) expenditures for construction, rental and lease, or purchase contract of office buildings and related facilities for the Social Security Administration.

The net worth of facilities and other fixed capital assets is not carried in the statements of the operations of the trust funds presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures, and therefore is not viewed as being a consideration in assessing the actuarial status of the trust funds.

The Social Security Act authorizes borrowing among the OASI, DI, and HI Trust Funds when necessary "to best meet the need for financing the benefit payments" from the three funds. The timing and amounts of the loans are largely at the discretion of the Managing Trustee, although no loans can be made after 1987. Loans may not be made from a trust fund if its assets (excluding any amounts borrowed) represent less than 10 percent of its current annual rate of expenditures. The law specifies that interest on a loaned amount will be paid monthly at a rate "equal to the rate which the lending Trust Fund would earn on the amount involved if the loan were an investment."

At the end of each year 1983-88, if the assets of the combined OASI and DI Trust Funds (including amounts borrowed) exceed 15 percent of the estimated outgo in the next year, such excess over 15 percent must be used to repay any outstanding loans from the HI Trust Fund. The same rule applies to loans from the OASI and DI Trust Funds to the HI Trust Fund, although no such loans are anticipated. In any case, all interfund loans must be completely repaid before 1990.

VI. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1982

A. OLD-AGE AND SURVIVORS INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Old-Age and Survivors Insurance Trust Fund in fiscal year 1982, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2. Comparable figures for fiscal year 1981 are also shown in the table.

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEARS 1981 AND 1982
[In thousands]

	Fiscal year 1981	Fiscal year 1982
Total assets, beginning of year	$24,565,757	$23,834,020
Receipts:		
Contributions:		
Appropriations	107,659,524	112,233,823
Deposits arising from State agreements	11,736,537	12,249,227
Gross contributions	119,396,061	124,483,050
Less payment into the general fund of the Treasury for contributions subject to refund	379,970	236,638
Net contributions	119,016,091	124,246,412
Payments from general fund of the Treasury for costs of:		
Noncontributory credits for military service	390,127	534,308
Payments to noninsured persons aged 72 before 1968:		
Benefit payments	126,850	116,850
Administrative expenses	1,343	1,097
Interest	21,616	22,460
Total reimbursement for payments to noninsured persons aged 72 before 1968	149,809	140,407
Interest:		
Interest on investments	2,018,614	1,708,038
Interest on amounts transferred to or from the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses[1]	302	-611
Interest on amounts of interfund transfers due to adjustment in allocation of administrative expenses and construction costs[1]	-2,615	695
Interest on amounts of interfund transfers due to adjustment in allocation of costs of vocational rehabilitation services[1]	-48	-8
Total interest	2,016,252	1,708,114
Gifts	32	33
Total receipts	121,572,311	126,629,274
Disbursements:		
Benefit payments:		
Gross benefit payments	119,832,055	135,257,381
Less collected overpayments	418,587	602,752
Net benefit payments	119,413,467	134,654,629
Transfer to Railroad Retirement Account	1,584,932	1,793,280
Payment for costs of vocational rehabilitation services for disabled beneficiaries:		
For current fiscal year	—	259
For prior fiscal year	—	5,466
Transfers to DI Trust Fund due to adjustment in allocation of costs for prior periods	7,542	432
Total payment for costs of vocational rehabilitation services	7,542	6,158
Administrative expenses:		
Department of Health and Human Services	1,203,618	1,284,908
Department of the Treasury	71,425	131,289

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEARS 1981 AND 1982 (Cont.)
[In thousands]

	Fiscal year 1981	Fiscal year 1982
Disbursements: (Cont.)		
Administrative expenses: (Cont.)		
Construction of facilities for Social Security Administration	$10,059	$55,974
Expenses of Department of Education for administration of vocational rehabilitation program for disabled beneficiaries	—	162
Interfund transfers due to adjustment in allocation of administrative expenses[2]	14,128	—
Interfund transfers due to adjustment in allocation of costs of construction[2]	-924	2,348
Gross administrative expenses	1,298,307	1,474,680
Less reimbursement from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	131	565
Less receipts from sales of supplies, materials, etc.	69	112
Net administrative expenses	1,298,107	1,474,003
Total disbursements	122,304,048	137,928,070
Net increase in assets	-731,737	-11,298,796
Total assets, end of year	23,834,020	12,535,224

[1] A positive figure represents a transfer of interest to the OASI Trust Fund from other Social Security trust funds or from the general fund account for the Supplemental Security Income (SSI) program. A negative figure represents a transfer of interest from the OASI Trust Fund to other Social Security trust funds or to the general fund account for the SSI program.

[2] A positive figure represents a transfer from the OASI Trust Fund to the other Social Security trust funds. A negative figure represents a transfer to the OASI Trust Fund from the other Social Security trust funds.

Note: Totals do not necessarily equal the sum of rounded components.

The total assets of the OASI Trust Fund amounted to $23,834 million on September 30, 1981. During fiscal year 1982, total receipts amounted to $126,629 million and total disbursements were $137,928 million. The assets of the trust fund thus decreased by $11,299 million during the year, to a total of $12,535 million on September 30, 1982. Included in total receipts during fiscal year 1982 were $112,234 million representing contributions appropriated to the fund and $12,249 million representing amounts received by the Secretary of the Treasury in accordance with State agreements for coverage of State and local government employees and deposited in the trust fund. As an offset, $237 million was transferred from the trust fund to the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the maximum earnings base.

Net contributions amounted to $124,246 million, an increase of 4.4 percent over the amount for the preceding fiscal year. This level of growth in contribution income resulted primarily from the net effect of (1) the higher level of earnings in covered employment; (2) the two increases in the maximum annual amount of taxable earnings—from $25,900 to $29,700 and from $29,700 to $32,400—that became effective on January 1, 1981, and January 1, 1982, respectively; and (3) the increase in the OASI contribution rate for employees and employers, each, from 4.52 percent to 4.70 percent that became effective on January 1, 1981, and the decrease from 4.70 percent to 4.575 percent that became effective January 1, 1982. Although the first increase in the maximum annual amount of taxable earnings, from $25,900 to $29,700, became effective in 1981, earnings between $25,900 and $29,700, which were taxable during all of fiscal year 1982, were taxable during only part of the preceding fiscal year.

Reference has been made in earlier sections to provisions of the Social Security Act under which the OASI and DI Trust Funds receive payments from the general fund of the Treasury for costs of granting noncontributory wage credits for military service and for the costs of payments to certain noninsured persons who were aged 72 before 1968. As indicated in the section describing the Social Security Amendments of 1983, the financing basis of military service wage credits will be substantially revised beginning in fiscal year 1983. The following comments relate to the fiscal year 1982 military service reimbursements only.

Section 217(g) of the Social Security Act provides for reimbursement of the additional costs attributable to military service performed before 1957 arising from benefit payments that have been made after August 1950 and those that will be made in future years. In accordance with section 217(g), as in effect at the time, the Secretary of Health and Human Services made a determination in 1980 of the level annual appropriations to the trust funds necessary to amortize the estimated total cost over a 34-year period, beginning in fiscal year 1982. The annual amounts resulting from this determination were $491 million for the OASI Trust Fund and $126 million for the DI Trust Fund. In accordance with section 229(b) of the Social Security Act, as in effect in December 1981, the Secretary of Health and Human Services determined that the OASI Trust Fund should receive reimbursement of $43 million, and the DI Trust Fund should receive reimbursement of $42 million, for additional costs in fiscal year 1981 attributable to noncontributory wage credits for military service performed after 1956. Thus, reimbursements amounting to $534 million for the OASI Trust Fund and $168 million for the DI Trust Fund were received in December 1981.

A reimbursement amounting to $140 million for the costs of monthly payments to certain noninsured persons who attained age 72 before 1968 was transferred from the general fund of the Treasury to the OASI Trust Fund in fiscal year 1982. This reimbursement, which was required by section 228 of the Social Security Act, reflected the costs of payments made in fiscal year 1980 and adjustments in the costs of payments made in prior fiscal years.

The OASI Trust Fund received $33,165 in gifts in fiscal year 1982 under the provisions authorizing the deposit of money gifts or bequests in the OASI and DI Trust Funds.

The remaining $1,708 million of receipts consisted of interest on the investments of the trust fund and net interest on amounts of interfund transfers arising out of adjustments in the allocation of administrative expenses, construction costs, and the costs of vocational rehabilitation services for prior fiscal years.

Of the $137,928 million in total disbursements, $134,655 million was for benefit payments, excluding collected overpayments of $603 million. This represents an increase of 12.8 percent over the corresponding amount for benefit payments in fiscal year 1981. This increase was due to (1) the automatic cost-of-living benefit increases of 11.2 percent and 7.4 percent, which became effective for June 1981 and June 1982, respectively, under the automatic provisions in section 215(i) of the Social Security Act and (2) increases in the total number of beneficiaries and increases in the average benefit amounts resulting from the rising level of earnings. Although the automatic benefit increase of 11.2 percent became effective in 1981, the resulting higher benefit levels (which were in effect during all of fiscal year 1982) were in effect during only part of the preceding fiscal year. The change in benefit payments from fiscal year 1981 to fiscal year 1982 also reflects the net effect of various provisions in the 1977 and later amendments.

In accordance with the provisions of the Railroad Retirement Act which coordinate the Railroad Retirement and OASI programs and which govern the financial interchanges arising from the allocation of costs between the two systems, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of $1,674 million to the Railroad Retirement Account from the OASI Trust Fund would place this trust fund in the same position as of September 30, 1981, as it would have been if railroad employment had always been covered under the Social Security Act. A total amount of $1,793 million was transferred to the Railroad Retirement Account in June 1982, including interest to the date of transfer amounting to $119 million.

Expenditures of the OASI program for the costs of vocational rehabilitation services amounted to $6,158,000. Most of this amount represents reimbursement to the Department of Education for rehabilitation services provided during fiscal year 1981. The balance represents payment for services in fiscal year 1982 (now made directly to the various State vocational rehabilitation agencies) and transfers to the DI Trust Fund resulting from adjustments to the allocations of vocational rehabilitation expenses between the two trust funds in prior years. Rehabilitation services were furnished to disabled adults (children of old-age beneficiaries and survivors of deceased insured workers) who were receiving monthly benefits from the OASI Trust Fund because of their disability. Beginning in fiscal year 1982, the reimbursement by the trust funds for such services is limited to certain cases where a return to substantial gainful activity results (at least in part) from the rehabilitation services.

The remaining $1,474 million of disbursements from the OASI Trust Fund represents net administrative expenses. The expenses of administering the programs financed through the four trust funds (the OASI, DI, HI, and Supplementary Medical Insurance Trust Funds) are allocated and charged directly to each trust fund on the basis of provisional estimates. Similarly, the expenses of administering the Supplemental Security Income program are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are effected by interfund transfers, including transfers between the OASI Trust Fund and the general fund account for the Supplemental Security Income program, with appropriate interest allowances.

Section 1131 of the Social Security Act authorizes annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for additional administrative expenses incurred by it as a result of furnishing information on deferred vested benefits to pension plan participants, as required by the Employee Retirement Income Security Act of 1974. This annual reimbursement in fiscal year 1982 amounted to $564,681.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1982 totaled $2,046 million. This amount represented 1.4 percent of contribution income and 1.3 percent of expenditures for benefit payments. Corresponding percentages for each of the last 5 years for the OASDI system as a whole and for each trust fund separately are shown in table 3.

TABLE 3.—RELATIONSHIP OF NET ADMINISTRATIVE EXPENSES OF THE OASDI PROGRAM TO CONTRIBUTION INCOME AND BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1978-82

Fiscal year	Total— Administrative expenses as a percentage of—		OASI Trust Fund— Administrative expenses as a percentage of—		DI Trust Fund— Administrative expenses as a percentage of—	
	Total contribution income	Total benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1978	1.6	1.6	1.5	1.4	2.6	2.7
1979	1.5	1.5	1.3	1.2	2.8	3.0
1980	1.3	1.3	1.2	1.2	2.0	2.2
1981	1.3	1.2	1.1	1.1	3.2	2.4
1982	1.4	1.3	1.2	1.1	2.7	3.3

In table 4, the actual amounts of contributions and benefit payments in fiscal year 1982 are compared with the estimated fiscal year 1982 amounts which appeared in the 1981 and 1982 Annual Reports. In each case, the estimates shown are the ones based on the alternative II-B set of assumptions from the report in question. The actual experience for each trust fund was quite close, relatively, to the estimates in the 1982 Annual Report. The estimates used in the 1981 Annual Report exceeded actual experience for both contributions and benefits, reflecting the severe economic slowdown in 1982 and slower growth in inflation than was anticipated. The comparison in table 4 is also affected, to a minor degree, by the various Social Security amendments enacted after the 1981 Annual Report was issued. Reference was made in an earlier section to the appropriation of contributions to the trust funds on an estimated basis, with subsequent periodic adjustments to account for differences from the amounts of contributions actually payable on the basis of reported earnings. In interpreting the figures in table 4, it should be noted that the "actual" amount of contributions in fiscal year 1982 reflects the aforementioned adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions in fiscal year 1982 does not reflect adjustments to contributions for fiscal year 1982 that were to be made after September 30, 1982.

TABLE 4.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1982

[Amounts in millions]

	OASI Trust Fund		DI Trust Fund	
	Net contributions	Benefit payments	Net contributions	Benefit payments
Actual amount	$124,246	$134,655	$20,866	$17,399
Estimated amount published in 1982 report	$124,742	$134,986	$20,826	$17,612
Actual as percentage of estimate	100	100	100	99
Estimated amount published in 1981 report	$128,571	$137,114	$21,674	$18,450
Actual as percentage of estimate	97	98	96	94

Note: In interpreting the figures in the above table, reference should be made to the accompanying text.

At the end of fiscal year 1982, about 35.6 million persons were receiving monthly benefits under the OASDI program. About 31.5 million of these persons were receiving monthly benefits from the OASI Trust Fund. The distribution of benefit payments in fiscal years 1981 and 1982, by type of beneficiary, is shown in table 5. Approximately 75 percent of the total benefit payments from the OASI Trust Fund in fiscal year 1982 represented monthly benefits to retired workers and their spouses and children, and about 17 percent represented monthly benefits to aged survivors and disabled widows and widowers of deceased workers. Approximately 8 percent of the benefit payments represented monthly benefits on behalf of children of deceased workers and monthly benefits to widowed mothers and fathers who had such children in their care.

TABLE 5.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI TRUST FUND, BY TYPE OF BENEFICIARY AND PAYMENT, FISCAL YEARS 1981 AND 1982

[Amounts in millions]

	Fiscal year 1981		Fiscal year 1982	
	Amount	Percent of total	Amount	Percent of total
Total	$119,413	100	$134,655	100
Monthly benefits	119,043	100	134,445	100
Retired workers and their dependents	89,032	75	101,290	75
Retired workers	80,466	67	91,791	68
Wives and husbands	7,280	6	8,230	6
Children	1,286	1	1,269	1
Survivors of deceased workers	29,899	25	33,053	25
Aged widows and widowers	19,666	16	22,472	17
Disabled widows and widowers	335	(1)	348	(1)
Parents	58	(1)	59	(1)
Children	8,116	7	8,331	6
Widowed mothers and fathers caring for child beneficiaries	1,724	1	1,843	1
Noninsured persons generally aged 72 before 1968	113	(1)	102	(1)
Lump-sum death payments	370	(1)	210	(1)

[1] Less than 0.5 percent.

Note: Totals do not necessarily equal the sum of rounded components.

In fiscal year 1982, special payments to noninsured persons who attained age 72 before 1968 (or who attained age 72 after 1967 and had 3 quarters of coverage for each year after 1966 and before the attainment of age 72) amounted to $102 million, or 0.1 percent of total benefit payments. The costs of such payments to persons who have fewer than 3 quarters of coverage are reimbursable from the general fund of the Treasury. About 96 percent of the total of such payments went to persons with fewer than 3 quarters of coverage.

During fiscal year 1982, lump-sum death payments amounted to $210 million, or 0.2 percent of total benefit payments.

The assets of the OASI Trust Fund at the end of fiscal year 1982 totaled $12,535 million, consisting of $11,922 million in U.S. Government obligations or federally sponsored agency obligations, and an undisbursed balance of $614 million. Table 6 shows the total assets of the fund and their distribution at the end of fiscal years 1981 and 1982.

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1981 AND 1982

	September 30, 1981		September 30, 1982	
	Par value	Book value[1]	Par value	Book value[1]
Investments in public-debt obligations:				
Public issues:				
Treasury bonds:				
3-percent, 1995	$70,170,000	$70,156,348.03	$70,170,000	$70,157,371.99
3¼-percent, 1978-83	60,200,000	60,101,357.42	60,200,000	60,160,542.62
3¼-percent, 1985	25,700,000	25,368,475.83	25,700,000	25,475,412.95
3½-percent, 1990	556,250,000	552,713,967.51	556,250,000	553,138,291.71
3½-percent, 1998	552,037,000	546,763,290.25	552,037,000	547,071,995.41
4⅛-percent, 1989-94	91,300,000	90,919,653.57	91,300,000	90,949,879.77
4¼-percent, 1975-85	78,023,000	77,947,810.82	78,023,000	77,968,794.14
4¼-percent, 1987-92	33,000,000	33,620,917.68	33,000,000	33,514,474.68
6⅜-percent, 1984	31,500,000	31,632,446.49	31,500,000	31,567,036.21
7¼-percent, 1988-93	99,934,000	98,987,481.80	99,934,000	99,066,909.92
7⅝-percent, 2002-07	15,000,000	14,992,501.90	15,000,000	14,992,796.86
7⅞-percent, 1995-2000	22,180,000	21,620,712.30	22,180,000	21,651,358.14
8-percent, 1996-2001	90,500,000	90,423,177.36	90,500,000	90,427,050.72
8¼-percent, 2000-05	22,450,000	22,445,044.50	22,450,000	22,445,243.34
8⅜-percent, 1995-2000	50,000,000	50,570,707.25	50,000,000	50,540,404.25
8½-percent, 1994-99	6,352,000	6,479,503.84	6,352,000	6,472,286.56
11¾-percent, 2010	153,100,000	152,035,784.80	153,100,000	152,073,345.28
Total investments in public issues	1,957,696,000	1,946,799,181.35	1,957,696,000	1,947,693,194.55
Obligations sold only to the trust funds (special issues):				
Certificates of indebtedness:				
14⅞-percent, 1982	7,764,737,000	7,764,737,000.00	—	—
12¼-percent, 1983	—	—	8,209,913,000	8,209,913,000.00
Bonds:				
7⅜-percent, 1991	125,848,000	125,848,000.00	—	—
7⅜-percent, 1992	2,014,741,000	2,014,741,000.00	—	—
7⅝-percent, 1990	547,391,000	547,391,000.00	—	—
7½-percent, 1990	522,029,000	522,029,000.00	—	—
7⅝-percent, 1991	1,888,893,000	1,888,893,000.00	—	—
8¼-percent, 1993	1,555,736,000	1,555,736,000.00	—	—
8⅝-percent, 1994	1,272,609,000	1,272,609,000.00	—	—
9⅝-percent, 1994	216,450,000	216,450,000.00	—	—
9¼-percent, 1995	1,489,059,000	1,489,059,000.00	—	—
13-percent, 1989	1,442,909,000	1,442,909,000.00	—	—
13-percent, 1990	419,639,000	419,639,000.00	—	—

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1981 AND 1982 (Cont.)

	September 30, 1981		September 30, 1982	
	Par value	Book value[1]	Par value	Book value[1]
Investments in public-debt obligations: (Cont.)				
Obligations sold only to the trust funds (special issues): (Cont.)				
Bonds: (Cont.)				
13-percent, 1996	$1,482,268,000	$1,482,268,000.00	$1,308,977,000	$1,308,977,000.00
Total obligations sold only to the trust funds (special issues)	20,742,309,000	20,742,309,000.00	9,518,890,000	9,518,890,000.00
Total investments in public-debt obligations	22,700,005,000	22,689,108,181.35	11,476,586,000	11,466,583,194.55
Investments in federally sponsored agency obligations:				
Participation certificates:				
Federal Assets Liquidation Trust — Government National Mortgage Association:				
5.10-percent, 1987	50,000,000	50,000,000.00	50,000,000	50,000,000.00
5.20-percent, 1982	100,000,000	100,000,000.00	—	—
Federal Assets Financing Trust — Government National Mortgage Association:				
6.05-percent, 1988	65,000,000	64,922,813.32	65,000,000	64,935,000.88
6.20-percent, 1988	230,000,000	230,000,000.00	230,000,000	230,000,000.00
6.40-percent, 1987	75,000,000	75,000,000.00	75,000,000	75,000,000.00
6.45-percent, 1988	35,000,000	35,000,000.00	35,000,000	35,000,000.00
Total investments in federally sponsored agency obligations	555,000,000	554,922,813.32	455,000,000	454,935,000.88
Total investments	23,255,005,000	23,244,030,994.67	11,931,586,000	11,921,518,195.43
Undisbursed balances	—	589,989,207.52	—	613,705,878.57
Total assets	—	23,834,020,202.19	—	12,535,224,074.00

[1] Par value, plus unamortized premium or less discount outstanding.

The net decrease in the par value of the investments owned by the fund during fiscal year 1982 amounted to $11,323 million. New securities with a total par value of $137,362 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was $148,685 million. Included in these amounts are $127,643 million in certificates of indebtedness that were acquired, and $127,197 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during the 12 months ending on June 30, 1982, was 10.1 percent. (This period is used, rather than the fiscal year, because (1) rollovers of short-term special issue notes into longer-term special-issue bonds occur on June 30 of each year, and (2) interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on special issues purchased by the trust fund in June 1982 was 13.25 percent, payable semiannually. The special issues purchased then included $9,719 million in Treasury bonds maturing in 1983. Although the interest rate on bonds is generally limited to 4¼ percent by 31 U.S.C. 752, subsequent amendments have authorized the issuance of bonds to the trust funds at rates of interest exceeding 4¼ percent.

Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The general practice in the past has been to spread the maturity dates for the holdings of special issues as nearly as practicable in equal amounts over a 15-year period. On June 30, 1982, however, it was clear that the continuing rapid decline in OASI Trust Fund assets would require redemption of virtually all securities, regardless of maturity, within the next few months. As a result, the certificates of indebtedness and other securities maturing on June 30, 1982, were replaced with new issues having maturity dates in 1983 only.

B. DISABILITY INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1982 and of the assets of the fund at the beginning and end of the fiscal year is presented in table 7. Comparable figures for fiscal year 1981 are also shown in the table.

TABLE 7.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEARS 1981 AND 1982

[In thousands]

	Fiscal year 1981	Fiscal year 1982
Total assets, beginning of year	$7,680,173	$3,392,434
Receipts:		
Contributions:		
Appropriations	11,387,656	18,887,415
Deposits arising from State agreements	1,248,844	2,010,068
Gross contributions	12,636,500	20,897,483
Less payment into the general fund of the Treasury for contributions subject to refund	47,010	31,027
Net contributions	12,589,490	20,866,456
Payments from general fund of the Treasury for costs of:		
Noncontributory credits for military service	130,389	168,235
Interest:		
Interest on investments	268,454	364,168
Interest on amounts of interfund transfers due to adjustment in allocation of administrative expenses and construction costs[1]	4,121	-757
Interest on amounts transferred from OASI Trust Fund due to adjustment in allocation of costs of vocational rehabilitation services	48	8
Total interest	272,624	363,420
Total receipts[2]	12,992,509	21,398,104
Disbursements:		
Benefit payments:		
Gross benefit payments	16,915,991	17,471,465
Less collected overpayments	62,679	72,060
Net benefit payments	16,853,311	17,399,405
Transfer to Railroad Retirement Account	29,443	26,354
Payment for costs of vocational rehabilitation services for disabled beneficiaries:		
For current fiscal year	—	1,633
For prior fiscal year	—	35,945
Less transfer from OASI Trust Fund due to adjustment in allocation of costs for prior periods	7,542	432
Total payment for costs of vocational rehabilitation services	-7,542	37,146
Administrative expenses:		
Department of Health and Human Services	414,314	538,332
Department of the Treasury	11,758	22,336
Construction of facilities for Social Security Administration	4,243	14,279
Expenses of Department of Education for administration of vocational rehabilitation program for disabled beneficiaries	—	978
Interfund transfers due to adjustment in allocation of costs of construction[3]	791	-3,479
Gross administrative expenses	431,106	572,446
Less interfund transfers due to adjustment in allocation of administrative expenses	26,047	—
Less receipts from sales of supplies, materials, etc.	22	47
Net administrative expenses	405,036	572,399
Total disbursements	17,280,249	18,035,304
Net increase in assets	-4,287,739	3,362,800
Total assets, end of year	3,392,434	6,755,234

[1] A positive figure represents a transfer of interest to the DI Trust Fund from other Social Security trust funds. A negative figure represents a transfer of interest from the DI Trust Fund to other Social Security trust funds.

[2] Includes gifts amounting to $7,005 during fiscal year 1981 and -$7,000 during fiscal year 1982 (representing the recovery of a prior year gift by the estate of the donor).

[3] A positive figure represents a transfer from the DI Trust Fund to the other Social Security trust funds. A negative figure represents a transfer to the DI Trust Fund from the other Social Security trust funds.

Note: Totals do not necessarily equal the sum of rounded components.

The total assets of the DI Trust Fund amounted to $3,392 million on September 30, 1981. During fiscal year 1982, total receipts amounted to $21,398 million, and total disbursements were $18,035 million. The assets of the trust fund thus increased by $3,363 million during the year, to a total of $6,755 million on September 30, 1982.

Included in total receipts were $18,887 million representing contributions appropriated to the fund and $2,010 million representing amounts received by the Secretary of the Treasury in accordance with State coverage agreements and deposited in the fund. As an offset, $31 million was transferred from the trust fund to the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the maximum earnings base.

Net contributions amounted to $20,866 million, an increase of 65.7 percent from the amount for the preceding fiscal year. This unusually large increase is primarily attributable to the expiration of the temporary reallocation of tax rates between OASI and DI that was in effect during calendar years 1980-81 as a result of Public Law 96-403. Because the reallocation was enacted after the close of fiscal year 1980, but was made retroactive to January 1, 1980, a significant part of the assets of the DI Trust Fund was transferred to the OASI Trust Fund—and was reflected in contribution income—in fiscal 1981. Thus contribution income to the DI Trust Fund was unusually low in fiscal year 1981. On January 1, 1982, the DI share of the OASDI tax rate reverted to a higher level (as scheduled prior to the temporary reallocation), causing a marked increase in DI tax income for fiscal year 1982 relative to fiscal year 1981. The change in the level of contributions also reflects the same factors, insofar as they apply to the DI program, that accounted for the change in contributions to the OASI Trust Fund (described in the preceding section).

In addition, the trust fund received $168 million in December 1981 from the general fund of the Treasury as reimbursement for the costs of noncontributory credits for military service. Of this amount, $126 million was reimbursed in accordance with section 217(g) and $42 million was reimbursed in accordance with section 229(b), as described in the preceding section.

The remaining $363 million of receipts consisted of interest on the investments of the fund, plus interest on amounts of interfund transfers.

Of the $18,035 million in total disbursements, $17,399 million was for benefit payments, excluding collected overpayments of $72 million. This represents an increase of 3.2 percent over the corresponding amount for benefit payments in fiscal year 1981. This increase reflects the same factors that resulted in the increase in benefit payments from the OASI Trust Fund as described in the preceding section. This increase also reflects the offsetting effects of (1) a continuing decline in the number of persons receiving benefits from the DI Trust Fund and (2) reductions in outlays resulting from the Social Security Amendments of 1977 and the Social Security Disability Amendments of 1980.

Provisions governing the financial interchanges between the Railroad Retirement Account and the DI Trust Fund are similar to those mentioned in the preceding section relating to the OASI Trust Fund. The determination made as of September 30, 1981, required that a transfer of $24,600,000 be made from the DI Trust Fund to the Railroad Retirement Account. A total amount of $26,354,000 was transferred to the Railroad Retirement Account in June 1982, including interest to the date of transfer amounting to $1,754,000.

The remaining disbursements amounted to $572 million for net administrative expenses and $37 million for the costs of vocational rehabilitation services furnished to disabled-worker beneficiaries and to those children of disabled workers who were receiving benefits on the basis of disabilities that began before age 22.

The total amount of funds that may be made available in a fiscal year for paying the costs of vocational rehabilitation services may not exceed a specified percentage of the benefits certified for payment in the preceding fiscal year from the OASI and DI Trust Funds to disabled persons receiving benefits because of their disability. This statutory limitation was 1½ percent in fiscal years 1974 and later. Beginning with payments for fiscal year 1977, such funds were further curtailed by limitations in the Budget of the United States for each year. In addition, the Omnibus Budget Reconciliation Act of 1981 limits reimbursement from the trust funds for the costs of such services to those cases where the services contributed to the successful rehabilitation of the beneficiary. The data presented below show the relationship between the total amount of such payments for fiscal years 1978-81 and the amount of benefits paid to disabled beneficiaries:

Fiscal year to which costs of rehabilitation services are charged	Amount of payments for costs of rehabilitation services[1] (in thousands)	Estimated amount of benefit payments in preceding fiscal year to disabled beneficiaries (in thousands)	Payments for costs of rehabilitation services as a percent of preceding year's benefit payments
1978	$94,539	$9,986,069	.95
1979	97,766	10,967,760	.89
1980	40,636	12,069,653	.34
1981	41,411	13,502,784	.31

[1] The amounts shown represent the expenditures incurred for a fiscal year and differ from amounts actually expended in a fiscal year as shown in accounting statements of the trust funds on a cash basis. The amounts shown are subject to revision.

At the end of fiscal year 1982, about 4.1 million persons were receiving monthly benefits from the DI Trust Fund. The distribution of benefit payments in fiscal years 1981 and 1982, by type of beneficiary, is shown in table 8.

TABLE 8.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE DI TRUST FUND, BY TYPE OF BENEFICIARY, FISCAL YEARS 1981 AND 1982

[Amounts in millions]

	Fiscal year 1981		Fiscal year 1982	
	Amount	Percent of total	Amount	Percent of total
Total	$16,853	100	$17,399	100
Disabled workers	14,057	83	14,764	85
Wives and husbands	678	4	666	4
Children	2,118	13	1,969	11

Note: Totals do not necessarily equal the sum of rounded components.

The assets of the DI Trust Fund at the end of fiscal year 1982 totaled $6,755 million, consisting of $6,751 million in U.S. Government obligations and an undisbursed balance of $4 million. Table 9 shows the total assets of the fund and their distribution at the end of fiscal years 1981 and 1982.

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1981 AND 1982

	September 30, 1981		September 30, 1982	
	Par value	Book value[1]	Par value	Book value[1]
Investments in public-debt obligations:				
Public issues:				
Treasury bonds:				
3½-percent, 1990	$10,500,000	$10,269,436.23	$10,500,000	$10,297,105.79
3½-percent, 1998	5,000,000	4,822,213.55	5,000,000	4,832,620.55
4⅛-percent, 1989-94	68,400,000	67,960,887.43	68,400,000	68,015,194.27
4¼-percent, 1975-85	20,795,000	20,789,718.98	20,795,000	20,791,192.46
4¼-percent, 1987-92	80,800,000	80,852,661.36	80,800,000	80,843,633.88
6⅜-percent, 1984	15,000,000	15,015,823.36	15,000,000	15,010,398.04
7¼-percent, 1988-93	26,500,000	26,042,754.92	26,500,000	26,080,125.04
7⅝-percent, 2002-07	10,000,000	9,995,000.90	10,000,000	9,995,197.46
8-percent, 1996-2001	26,000,000	25,977,929.26	26,000,000	25,979,042.02
8¼-percent, 2000-05	3,750,000	3,733,774.01	3,750,000	3,734,459.57
11¾-percent, 2010	30,250,000	30,039,729.70	30,250,000	30,047,150.38
Total investments in public issues	296,995,000	295,519,931.70	296,995,000	295,626,119.46
Obligations sold only to the trust funds (special issues):				
Certificates of indebtedness:				
12⅜-percent, 1983	—	—	1,551,812,000	1,551,812,000.00
13⅛-percent, 1983	—	—	1,844,251,000	1,844,251,000.00
13⅞-percent, 1983	—	—	1,674,067,000	1,674,067,000.00
14⅝-percent, 1982	1,282,170,000	1,282,170,000.00	—	—
Bonds:				
7⅝-percent, 1992	161,560,000	161,560,000.00	—	—
8¼-percent, 1993	241,389,000	241,389,000.00	162,136,000	162,136,000.00
8⅜-percent, 1992	64,425,000	64,425,000.00	—	—
8⅜-percent, 1993	97,887,000	97,887,000.00	97,887,000	97,887,000.00
8⅜-percent, 1994	339,277,000	339,277,000.00	339,277,000	339,277,000.00
9¼-percent, 1992	142,337,000	142,337,000.00	—	—
9¼-percent, 1993	142,337,000	142,337,000.00	142,337,000	142,337,000.00
9¼-percent, 1994	142,336,000	142,336,000.00	142,336,000	142,336,000.00
9¼-percent, 1995	481,613,000	481,613,000.00	481,613,000	481,613,000.00

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1981 AND 1982 (Cont.)

	September 30, 1981		September 30, 1982	
	Par value	Book value[1]	Par value	Book value[1]
Investments in public-debt obligations: (Cont.)				
Obligations sold only to the trust funds (special issues): (Cont.)				
Bonds: (Cont.)				
13⅛-percent, 1983	—	—	$19,947,000	$19,947,000.00
Total obligations sold only to the trust funds (special issues)............	$3,095,331,000	$3,095,331,000.00	6,455,663,000	6,455,663,000.00
Total investments in public-debt obligations....	3,392,326,000	3,390,850,931.70	6,752,658,000	6,751,289,119.46
Undisbursed balances.......	—	1,582,891.88	—	3,944,459.84
Total assets.....	—	3,392,433,823.58	—	6,755,233,579.30

[1]Par value, plus unamortized premium or less discount outstanding.

The net increase in the par value of the investments owned by the trust fund during the fiscal year amounted to $3,360 million. New securities with a total par value of $25,833 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $22,472 million. Included in these amounts are $21,565 million in certificates of indebtedness that were acquired, and $17,777 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the DI Trust Fund during the 12 months ending on June 30, 1982, was 11.0 percent. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1982 was 13.25 percent, payable semiannually.

The investment policy and practices described in the preceding section concerning the OASI Trust Fund apply as well to the investment of the assets of the DI Trust Fund.

VII. ACTUARIAL COST PROJECTIONS

Section 201(c) of the Social Security Act requires that the Board of Trustees report annually to the Congress on the operations and status of the OASI and DI Trust Funds during the preceding fiscal year and on the expected operations and status of those trust funds during the ensuing 5 fiscal years. Such information for the fiscal year that ended September 30, 1982, is presented in the preceding section of this report. Estimates of the operations and status of the trust funds during fiscal years 1983-87 are presented in this section. Similar estimates for calendar years 1983-87 are also presented.

Section 201(c) also requires that the report include "a statement of the actuarial status of the trust funds." Such statements have customarily been made for the medium-range period (25 years) and the long-range period (75 years), each period commencing with the year of issuance of the report. The statement of the long-range actuarial status has customarily included the actuarial status during the second and third 25-year subperiods of the long-range projection period. Statements of the current actuarial status are presented in this section. The methods used to estimate the actuarial status are described in Appendix A.

Basic to the discussion of the medium-range or long-range actuarial status of either trust fund are the concepts of "cost rate" and "total income rate," each of which is expressed as a percentage of taxable payroll. The taxable payroll consists of the total earnings which are subject to Social Security taxes, including deemed wages based on military service. The total earnings are adjusted to reflect the lower effective tax rates (in comparison with the combined employee-employer rate) which apply to tips, multiple-employer "excess wages," and self-employment income through 1983. The cost rate is the ratio of the cost (or outgo or disbursements) of the program to the taxable payroll. The outgo includes benefit payments, administrative expenses, net transfers under the financial interchange between the OASI and DI Trust Funds and the Railroad Retirement Account, and payments for vocational rehabilitation services for disabled beneficiaries. Because the taxable payroll includes the adjustments described above, the total income rate (or more simply, the income rate) can be defined to be the sum of the combined OASDI employee-employer tax rate (or the payroll tax rate) scheduled in the law and the rate of income from taxation of benefits (which is in turn defined to be the income from the taxation of benefits expressed as a percentage of taxable payroll).

With these definitions, for any year, the income rate minus the cost rate (referred to as the "balance" for the year) is a measure of the amount by which the payroll tax rate would need to be increased or decreased in order to cover exactly the cost for that year.

Over the medium-range and long-range periods, the actuarial status of the trust funds is often summarized by the actuarial balance, which is the difference between the appropriate estimated average income rate and the estimated average cost rate (or, equivalently, the average of the annual balances for the years included in the appropriate projection period). If the actuarial balance is positive, the system is said to have an actuarial surplus, and if negative, an actuarial deficit. Such a deficit, if it exists, is a warning that, unless the projected trends turn out to be too pessimistic, changes in the system, or in its financing, will be needed in the future.

The concept of actuarial balance must be used with caution. The use of a single measure to describe the system over a period of many years may mask adverse patterns within that period or problems which emerge soon thereafter. The addition or deletion of a few years to the time period could change a surplus into a deficit or vice versa. In addition, while early deficits followed by later surpluses could result in a positive actuarial balance, the trust fund could be depleted before the annual surpluses occur. Conversely, while early surpluses followed by later deficits could result in a positive actuarial balance, the trust fund that would be built up in the early years could eventually be depleted at some point beyond the end of the 75-year projection period, leaving the program in the situation of being unable to pay benefits at that time. Thus, it is also important to note the year-by-year patterns of income and outgo.

Related to the concept of actuarial balance is that of "close actuarial balance." The system is said to be in "close actuarial balance" over the long-range period if the estimated average income rate is between 95 percent and 105 percent of the estimated average cost rate.

The OASDI system has generally operated over the years on a "current cost" financing basis, under which total income in each year is intended to be approximately equal to total outgo plus an additional amount needed to maintain the trust funds at appropriate contingency-reserve levels. Under this financing method, the assets of the trust funds should not become too large (through continued annual surpluses), nor too small (through continued annual deficits). Although there is no general agreement regarding the appropriate size of the trust funds, the level of each fund should be large enough to allow time for legislative action to prevent its exhaustion during periods of continued annual deficits. When either trust fund is not large enough to serve this purpose, the future financing of that fund—to be considered adequate—must provide for rebuilding the fund to the needed level within a reasonable period of time without significant declines in the interim.

The adequacy of the trust fund level is often measured by the "trust fund ratio." This ratio is defined as the assets at the beginning of the year expressed as a percentage of the outgo during the year. As a minimum test of the financial viability of the trust funds in the near term, the projected trust fund ratios should not fall below 12-14 percent, even under pessimistic assumptions. Substantially higher levels are desirable.

Projections of income, outgo, cost rates, actuarial balances, and trust fund ratios are presented later in this section.

A. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the OASDI system depend on many economic and demographic factors, including fertility, mortality, net immigration, marriage, divorce, labor force participation, unemployment, productivity, inflation, retirement patterns, and disability incidence and duration. The income will depend on how these factors affect the size and composition of the working population and the general level of earnings. Similarly, the outgo will depend on how these factors affect the size and composition of the beneficiary population and the general level of benefits. Because precise forecasting of these various factors is impossible, projections are shown in this report on the basis of four sets of assumptions, designated as alternatives I, II-A, II-B, and III.

The two intermediate sets of assumptions, alternatives II-A and II-B, share the same demographic assumptions but differ in their economic assumptions. Alternative II-A assumes a more robust economic expansion than alternative II-B. This type of presentation is made to illustrate the beneficial effect on the financial status of the trust funds of higher real-wage growth, higher employment, and lower inflation for any given set of demographic assumptions. In terms of the net effect on the status of the trust funds, alternative II-A is more optimistic than alternative II-B. Of all four alternatives, alternative I is the most optimistic, and alternative III is the most pessimistic. The range of future short-range economic performance delineated by these alternatives is slightly narrower than in last year's report. This is largely the result of slower assumed growth in alternatives I and II-A.

Although these sets of economic and demographic assumptions have been developed using the best available information, the resulting cost projections should be interpreted with care. In particular, they are not intended to be exact predictions of the future status of the OASDI system, but rather, they are intended to be indicators of the trend and range of future income and outgo.

Economic assumptions

The economic assumptions in the four alternatives are summarized in table 10.

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2060

Calendar year	Average annual percentage increase in— Real GNP[1]	Average wages in covered employment	Consumer price index	Real-wage differential[2] (percent)	Average annual interest rate[3] (percent)	Average annual unemployment rate[4] (percent)
Past experience:						
1960-64	4.0	3.4	1.3	2.1	3.7	5.7
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970	-.2	4.9	5.9	-1.0	7.3	4.9
1971	3.4	4.9	4.3	.6	6.0	5.9
1972	5.7	7.3	3.3	4.0	5.9	5.6
1973	5.8	6.9	6.2	.7	6.6	4.9
1974	-.6	7.4	11.0	-3.6	7.5	5.6
1975	-1.2	6.6	9.1	-2.5	7.4	8.5
1976	[5]8.2		5.7	[5]2.5	7.1	7.7
1977	5.5	[5]8.0	6.5	[5]1.5	7.1	7.1
1978	5.0	[5]8.2	7.6	[5].6	8.2	6.1
1979	2.8	[5]8.8	11.4	[5]-2.6	9.1	5.8
1980	-.4	[5]8.6	13.5	[5]-4.9	11.0	7.1
1981	1.9	[5]8.8	10.2	[5]-1.4	13.3	7.6
1982	-1.7	[5]5.6	6.0	[5]-.4	12.8	9.7
Alternative I:						
1983	3.4	4.3	2.5	1.8	9.6	10.0
1984	5.7	5.2	3.3	1.9	6.7	8.6
1985	5.1	5.3	3.7	1.6	5.8	7.5
1986	4.5	5.6	3.3	2.3	5.4	7.0
1987	4.5	5.7	3.0	2.7	5.3	6.6
1988	4.5	5.4	2.7	2.7	5.2	6.1
1989	4.5	5.2	2.3	2.9	5.1	5.6
1990	4.5	5.1	2.0	3.1	5.1	5.2
1991	4.5	5.3	2.0	3.3	5.1	4.8
1992	4.4	5.2	2.0	3.2	5.1	4.5
1993	3.9	4.9	2.0	2.9	5.1	4.3
1994	3.8	4.7	2.0	2.7	5.1	4.1
1995	3.8	4.5	2.0	2.5	5.1	4.0
2000 & later	[6]3.6	4.5	2.0	2.5	5.1	4.0
Alternative II-A:						
1983	3.1	4.3	2.7	1.6	9.7	10.0
1984	4.8	5.0	3.6	1.4	6.8	8.8
1985	4.1	4.8	4.0	.8	6.0	7.9
1986	4.0	5.1	3.6	1.5	5.6	7.4
1987	4.0	5.2	3.2	2.0	5.6	6.9
1988	4.0	5.0	3.0	2.0	5.6	6.3
1989	4.0	5.3	3.0	2.3	5.6	5.8
1990	3.7	5.5	3.0	2.5	5.6	5.4
1991	3.2	5.4	3.0	2.4	5.6	5.3
1992	3.3	5.3	3.0	2.3	5.6	5.3
1993	3.3	5.2	3.0	2.2	5.6	5.2
1994	3.3	5.0	3.0	2.0	5.6	5.1
1995	3.3	5.0	3.0	2.0	5.6	5.0
2000 & later	[6]3.1	5.0	3.0	2.0	5.6	5.0
Alternative II-B:						
1983	2.4	4.6	3.1	1.5	9.8	10.1
1984	4.1	4.6	4.4	.2	7.3	9.1
1985	3.7	5.5	5.3	.2	6.9	8.3
1986	3.1	5.6	4.8	.8	6.6	7.9
1987	3.0	5.7	4.4	1.3	6.4	7.6
1988	3.0	5.4	4.1	1.3	6.3	7.3
1989	3.0	5.4	4.0	1.4	6.3	6.9
1990	3.0	5.6	4.0	1.6	6.2	6.5
1991	3.0	5.7	4.0	1.7	6.1	6.2
1992	3.0	5.6	4.0	1.6	6.1	5.8
1993	2.5	5.5	4.0	1.5	6.1	5.7
1994	2.5	5.5	4.0	1.5	6.1	5.6
1995	2.6	5.5	4.0	1.5	6.1	5.5
2000 & later	[6]2.6	5.5	4.0	1.5	6.1	5.5

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2060 (Cont.)

Calendar year	Average annual percentage increase in—					
	Real GNP[1]	Average wages in covered employment	Consumer price index	Real-wage differential[2] (percent)	Average annual interest rate[3] (percent)	Average annual unemployment rate[4] (percent)
Alternative III:						
1983	0.5	3.9	3.3	.6	9.9	10.5
1984	1.7	4.6	6.4	-1.8	8.0	10.5
1985	3.9	7.4	7.7	-.3	8.4	9.5
1986	3.1	7.5	7.3	.1	9.0	8.9
1987	2.7	6.7	6.0	.7	8.6	8.6
1988	2.7	6.4	5.5	.9	8.2	8.2
1989	2.7	6.2	5.1	1.1	7.7	7.8
1990	2.7	6.2	5.0	1.2	7.3	7.4
1991	2.6	6.3	5.0	1.3	6.8	7.0
1992	2.5	6.1	5.0	1.1	6.6	6.8
1993	2.3	6.1	5.0	1.1	6.6	6.5
1994	2.0	6.0	5.0	1.0	6.6	6.5
1995	2.1	6.0	5.0	1.0	6.6	6.5
2000 & later	[6]2.1	6.0	5.0	1.0	6.6	6.5

[1] The real GNP (Gross National Product) is the total output of goods and services expressed in 1972 dollars.

[2] The real-wage differential is defined as the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.

[3] The average annual interest rate is the average of the interest rates in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.

[4] The ultimate rates include military personal and are adjusted by age and sex based on the total labor force aged 16 and over as of July 1, 1981. Rates shown for earlier years are crude civilian unemployment rates for those years.

[5] Preliminary.

[6] This value is for the year 2000. The annual percentage increase in real GNP is assumed to continue to change after 2000 under each alternative to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The percentage increases for 2060 are 3.2, 2.3, 1.9, and 0.8 for alternatives I, II-A, II-B, and III, respectively.

Alternatives I, II-A, and II-B assume the economic recovery started in the first quarter of 1983, but with the most rapid growth occurring later in 1983. Alternative III assumes that the economy will stagnate for one more year, with the recovery starting in the second quarter of 1984. The more optimistic the alternative, the stronger and longer is the assumed recovery. Specifically, the real GNP in 1983 is assumed to increase above the 1982 level by 3.4 percent, 3.1 percent, 2.4 percent, and 0.5 percent in alternatives I, II-A, II-B, and III, respectively.

After the recovery period, each of the alternatives assumes a steady rate of growth in real GNP during the short-range period. The assumed rates of growth are 4.5 percent, 4.0 percent, 3.0 percent, 2.7 percent for the respective alternatives. In alternatives I and II-A, the steady growth begins during 1985, while in alternatives II-B and III, it begins during 1986.

In alternative II-A, the average annual unemployment rate declines from its peak of 10.0 percent in 1983 to its ultimate level of 5.0 percent in 1995. The annual rate of increase in average wages in covered employment is assumed to fluctuate around 5 percent until 1994 when it becomes steady at that ultimate rate. The annual rate of increase in the average CPI is assumed to rise from 2.7 percent in 1983 to 4.0 percent in 1985 and then to decline to an ultimate rate of 3.0 percent in 1988. The real-wage differential (i.e., the difference between annual rates of increase in the average wage and the average CPI) is assumed to decline from 1.6 percent in 1983 to 0.8 percent in 1985 and then to reach a peak of 2.5 percent in 1990 before declining to its ultimate rate of 2.0 percent in 1994. The annual interest rate is assumed to reach its ultimate value of 5.6 percent in 1986.

In alternative II-B, the average annual unemployment rate declines from its peak of 10.1 percent in 1983 to its ultimate level of 5.5 percent in 1995. The annual rate of increase in average wages in covered employment is assumed to fluctuate around 5.5 percent until 1993 when it becomes steady at that ultimate rate. The annual rate of increase in the average CPI is assumed to rise from 3.1 percent in 1983 to 5.3 percent in 1985 and then to decline to an ultimate rate of 4.0 percent in 1989. The real-wage differential is assumed to reach an ultimate rate of 1.5 percent per year in 1993. The annual interest rate is assumed to reach its ultimate value of 6.1 percent in 1991.

It is convenient to discuss alternative I in comparison with alternative II-A, the more optimistic of the two intermediate alternatives. In each year, the assumed annual percentage increase in the real GNP in alternative I is higher. Consistent with this higher real GNP is an assumed average annual unemployment rate which in each year is lower, with the ultimate rate of 4.0 percent being 1 percentage point lower. The assumed annual percentage increases in the CPI are also lower, with the ultimate rate of 2.0 percent being 1 percentage point lower. In each year, the assumed real-wage differential is higher, with the ultimate rate of 2.5 percent being 0.5 percentage points higher. The resulting ultimate annual rate of increase in average wages in covered employment is 4.5 percent, which is 0.5 percentage points lower. The ultimate interest rate of 5.1 percent is lower by 0.5 percentage points.

Similarly, it is convenient to discuss alternative III in comparison with alternative II-B, the more pessimistic of the two intermediate alternatives. In each year after 1985, the assumed annual percentage increase in the real GNP in alternative III is lower. Consistent with this lower real GNP is an average annual unemployment rate which in every year is higher, with the ultimate level of 6.5 percent being 1 percentage point higher. The assumed annual percentage increase in the CPI is higher in each year, with the ultimate of 5.0 percent being 1 percentage point higher. In every year, the assumed real-wage differential is lower, with the ultimate of 1.0 percent being 0.5 percentage points lower. The resulting ultimate annual rate of increase in average wages in covered employment is 6.0 percent, which is 0.5 percentage points higher. The ultimate interest rate of 6.6 percent is higher by 0.5 percentage points.

Demographic assumptions

The demographic assumptions in the four alternatives are shown in table 11.

TABLE 11.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2060

Calendar year	Total fertility rate[1]	Life expectancy[2]			
		At birth		At age 65	
		Male	Female	Male	Female
Past experience:					
1940	2.23	60.9	65.3	11.9	13.4
1945	2.42	62.5	68.2	12.6	14.4
1950	3.03	65.3	70.9	12.8	15.1
1955	3.50	66.6	72.7	13.1	15.6
1960	3.61	66.6	73.2	12.9	15.9
1965	2.88	66.8	73.8	12.9	16.3
1970	2.43	67.1	74.8	13.1	17.1
1975	1.77	68.8	76.6	13.7	18.0
1976	1.74	69.1	76.8	13.7	18.1
1977	1.79	69.4	77.2	13.9	18.3
1978	1.76	69.6	77.3	13.9	18.3
1979	1.82	69.9	77.8	14.2	18.6
1980	1.85	69.8	77.5	14.0	18.3
1981	1.85	70.3	77.8	14.2	18.5
Alternative I:					
1982	1.85	70.4	77.9	14.3	18.6
1983	1.87	70.5	78.0	14.3	18.7
1984	1.89	70.6	78.1	14.3	18.8
1985	1.91	70.7	78.2	14.4	18.8
1990	2.01	71.1	78.7	14.5	19.2
1995	2.10	71.5	79.1	14.6	19.4
2000	2.18	71.7	79.3	14.8	19.6
2005	2.27	71.9	79.5	14.9	19.8
2010	2.30	72.0	79.7	15.0	19.9
2020	2.30	72.3	80.0	15.2	20.2
2030	2.30	72.6	80.3	15.4	20.4
2040	2.30	72.9	80.6	15.6	20.7
2050	2.30	73.2	80.9	15.8	20.9
2060	2.30	73.4	81.2	16.0	21.2
Alternatives II-A and II-B:					
1982	1.85	70.6	78.1	14.3	18.7
1983	1.86	70.8	78.3	14.4	18.9
1984	1.86	71.1	78.5	14.5	19.0
1985	1.87	71.3	78.8	14.6	19.2
1990	1.90	72.3	79.8	15.1	19.9
1995	1.93	73.0	80.6	15.5	20.5
2000	1.96	73.4	81.0	15.7	20.8
2005	1.99	73.7	81.3	15.9	21.0
2010	2.00	73.9	81.6	16.1	21.3
2020	2.00	74.4	82.2	16.4	21.7
2030	2.00	74.9	82.7	16.8	22.2
2040	2.00	75.4	83.3	17.2	22.6
2050	2.00	75.8	83.8	17.5	23.1
2060	2.00	76.3	84.4	17.9	23.6
Alternative III:					
1982	1.85	70.7	78.2	14.4	18.8
1983	1.84	71.1	78.6	14.6	19.0
1984	1.82	71.5	79.0	14.8	19.3
1985	1.81	71.8	79.3	14.9	19.5
1990	1.75	73.4	80.9	15.7	20.7
1995	1.70	74.5	82.1	16.3	21.5
2000	1.66	75.1	82.8	16.8	22.1
2005	1.62	75.7	83.4	17.2	22.5
2010	1.60	76.2	84.0	17.6	23.0
2020	1.60	77.2	85.2	18.4	24.0
2030	1.60	78.3	86.4	19.2	24.9
2040	1.60	79.3	87.5	20.0	25.8
2050	1.60	80.3	88.6	20.9	26.8
2060	1.60	81.3	89.7	21.7	27.7

[1] The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period.

[2] The life expectancy for any year is the average number of years of life remaining to a person if that person were to experience the death rates by age observed in, or assumed for, the selected year.

The demographic assumptions in alternatives II-A and II-B are identical. The assumed ultimate total fertility rate is 2.0 children per woman. This ultimate level of fertility is attained in 2007, after a gradual increase from the estimated 1982 level of 1.85 children per woman. Mortality rates are assumed to decrease gradually during the entire 75-year projection period, with an average reduction from 1979 levels of 39 percent by the year 2060. This reduction results in life expectancies at birth in 2060 of 76.3 years for men and 84.4 years for women, compared to 69.9 and 77.8 years, respectively, observed in 1979. Life expectancies at age 65 in 2060 are projected to be 17.9 years for men and 23.6 years for women, compared to 14.2 and 18.6 years, respectively, observed in 1979.

In alternative I, the total fertility rate is assumed to be higher than in the other alternatives, reaching an ultimate level of 2.3 children per woman, which is attained in 2007. Mortality rates are assumed to decrease more slowly than in alternatives II-A and II-B, with the average reduction from 1979 levels being 23 percent by the year 2060. The resulting life expectancies at birth by 2060 are projected to be 73.4 years for men and 81.2 years for women, while at age 65 they are 16.0 and 21.2 years, respectively.

In alternative III, the total fertility rate is assumed to be lower than in the other alternatives, decreasing from the estimated 1982 level to an ultimate level of 1.6, which is attained in 2007. Mortality rates are assumed to decrease more rapidly than in alternatives II-A and II-B, with the average reduction from 1979 levels being 60 percent by the year 2060. The resulting life expectancies at birth by 2060 are projected to be 81.3 years for men and 89.7 years for women, while at age 65 they are 21.7 and 27.7 years, respectively.

The values assumed after the early years for both the economic and the demographic factors are intended to represent the average experience for those years and are not intended to be predictions of year-by-year values. Actual future values will likely exhibit fluctuations or cyclical patterns, as in the past.

In addition to the assumptions discussed above, many other assumed or derived factors (such as labor force participation rates, marriage rates, and others) are necessary to prepare the cost estimates presented in this report. Appendix A includes a discussion of some of those factors.

B. AUTOMATIC ADJUSTMENTS

Under the automatic-increase provisions of the law, benefits are generally adjusted once a year to reflect increases in the CPI. Beginning in 1984, these automatic increases may be modified when trust fund balances meet certain conditions. These modifications are permitted under the stabilizer provision of the 1983 amendments, which are described in an earlier section. For persons becoming eligible for benefits in 1979 and later, the automatic cost-of-living benefit increases generally begin with the year a worker reaches age 62, or becomes disabled or dies, if earlier. An automatic cost-of-living benefit increase of 7.4 percent, effective for June 1982, was announced in April 1982, as described in Appendix C. An increase of 3.5 percent will become effective for December 1983, as recently determined and announced.

Except for the amounts specified for 1979-81 in the Social Security Amendments of 1977, the contribution and benefit base automatically increases in the year following a year in which an automatic cost-of-living benefit increase becomes effective. Such automatic increases are proportionate to the increases in average wages. For 1983, the contribution and benefit base was automatically increased to $35,700.

The 1977 amendments also specified for 1978-82 the exempt amount under the retirement earnings test for beneficiaries aged 65 and over. For 1983 and later, this amount increases automatically by the increase in average wages. Following the cost-of-living benefit increase that became effective for June 1982, an automatic increase in the annual exempt amount for beneficiaries aged 65 and over, from $6,000 in 1982 to $6,600 in 1983, was announced in November 1982. Similarly, an automatic increase was announced in the exempt amount for beneficiaries under age 65, from $4,440 in 1982 to $4,920 in 1983. Appendix D describes all of the aforementioned automatic adjustments, as well as the determinations of the following amounts:

1. The amount of earnings a worker must have to be credited with a quarter of coverage in 1983;
2. The dollar amounts (or "bend points") in the formulas used to compute benefits payable on the earnings of workers who first become eligible for retirement or disability benefits, or who die before becoming eligible for such benefits, in 1983; and
3. The average of total wages reported for calendar year 1981, to be used for indexing earnings of workers who first become eligible for benefits, or who die before such eligibility, in 1983 or later.

An historical summary of the Social Security program amounts determined under the automatic provisions, and the average-wage series used for indexing earnings, are shown in Appendix E, which also shows a projection, through 1988, of the corresponding amounts resulting from the two intermediate sets of assumptions.

The law provides for the determination of the contribution and benefit bases that would have been in effect in each year after 1978 under the automatic provisions of the law as in effect before the enactment of the

1977 amendments. This "old-law" base is used in determining special-minimum benefits for certain workers who have many years of low earnings in covered employment. Beginning in 1986, the old-law base will be used in the calculation of benefits for certain workers who have pensions based on noncovered employment. It is also used for certain purposes under the Railroad Retirement program and the Employee Retirement Income Security Act of 1974. For 1982, the old-law base was $24,300. The corresponding old-law base for 1983 was determined to be $26,700.

The four alternative sets of economic assumptions described previously result in the following general benefit increases and contribution and benefit bases for each year through 1988 (actual benefit increases and actual contribution and benefit bases for 1982 and 1983 are also shown as a basis for comparison):

Calendar year	General benefit increase[1] (percent) under alternative—				Contribution and benefit base[2] under alternative-			
	I	II-A	II-B	III	I	II-A	II-B	III
1982	7.4	7.4	7.4	7.4	$32,400	$32,400	$32,400	$32,400
1983	3.5	3.5	3.5	3.5	35,700	35,700	35,700	35,700
1984	3.4	3.7	4.6	[3]4.0	37,500	37,500	37,500	37,500
1985	3.7	4.0	5.3	[3]3.9	39,300	39,000	39,300	39,000
1986	3.3	3.5	4.7	[3]7.2	41,100	40,500	40,800	40,500
1987	3.0	3.2	4.4	5.8	43,200	42,300	42,900	43,500
1988	([4])	3.0	4.1	5.4	45,600	44,400	45,300	46,800

[1] Automatic benefit increases prior to 1983 were effective with benefits for June of the year shown. As a result of the Social Security Amendments of 1983, automatic benefit increases in 1983 and later will be effective with benefits for December of the year shown.

[2] The amounts, effective on January 1 of the stated year, are specified in the law for the years 1979-81. After 1981, the amount increases under the automatic provisions.

[3] Under the alternative III assumptions, benefit increases for December of each year 1984-86 would be determined under the benefit increase stabilizer provision of the 1983 amendments. If the benefit increases were calculated without the limitation imposed by the stabilizer provision, they would be 6.6 percent, 7.9 percent, and 7.3 percent, respectively, under these assumptions.

[4] Under the alternative I assumptions, no benefit increase would occur in 1988 because the assumed increase in the Consumer Price Index is less than the 3-percent rate required to trigger a benefit increase.

The automatic benefit increases shown in the above table under alternative III reflect the effects of the benefit increase stabilizer provision in 1984, 1985, and 1986. Based on alternative III, the assets of the OASDI Trust Funds (excluding amounts borrowed from the HI Trust Fund) would represent less than 15 percent of annual expenditures at the end of 1984 and at the beginning of each year 1985-86. In addition, the assumed increases in average annual wages in 1983, 1984, and 1985 are less than the assumed increases in prices (as measured by the third quarter CPI) in 1984, 1985 and 1986, respectively. Under these conditions, the stabilizer provision would require that the automatic benefit increase in each year be based on the lower increase in average wages rather than on the CPI increase that would normally apply. While not shown in the table, under alternative III the trust funds would increase sufficiently after 1987 to trigger "catch-up" benefit increases in 1990 for those beneficiaries whose benefit increases were reduced at any time during 1984-86 as a result of this provision. The "catch-up" increases would increase each affected individual's benefit to the level at which it would have been if all increases had been based on the CPI.

Under the automatic provisions of the law, the four different sets of economic assumptions result in the following annual exempt amounts under the retirement earnings test, both for beneficiaries under age 65 and for beneficiaries aged 65 and over (the amounts for 1982 and 1983 are also shown as a basis for comparison):

ANNUAL EXEMPT AMOUNTS UNDER THE RETIREMENT EARNINGS TEST[1]

Calendar year	Annual exempt amount for beneficiaries under age 65 under alternative—				Annual exempt amount for beneficiaries aged 65 and over[2] under alternative-			
	I	II-A	II-B	III	I	II-A	II-B	III
1982	$4,440	$4,440	$4,440	$4,440	$6,000	$6,000	$6,000	$6,000
1983	4,920	4,920	4,920	4,920	6,600	6,600	6,600	6,600
1984	5,160	5,160	5,160	5,160	6,960	6,960	6,960	6,960
1985	5,400	5,400	5,400	5,400	7,320	7,320	7,320	7,200
1986	5,640	5,640	5,640	5,640	7,680	7,680	7,560	7,440
1987	5,880	5,880	6,000	6,000	8,040	8,040	7,920	7,920
1988	6,240	6,120	6,360	6,480	8,520	8,400	8,400	8,520

[1] Effective on January 1 of the stated year.

[2] The amounts are specified in the law for the years 1978-82. After 1982, the amount increases automatically. In 1955-82, the retirement earnings test did not apply to beneficiaries aged 72 and over; after 1982, it does not apply to beneficiaries aged 70 and over.

C. ESTIMATED OPERATIONS AND STATUS OF THE TRUST FUNDS DURING THE PERIOD OCTOBER 1, 1982 TO DECEMBER 31, 1987

The following statement of the estimated operations and status of the trust funds during the period October 1, 1982, to December 31, 1987, is based on the assumptions described in the preceding sections. As previously stated, it is assumed that present statutory provisions and regulations affecting the program will remain unchanged in the period. The estimates reflect the effects of the Social Security Amendments of 1983 and the other legislative changes described in section IV.

The 1982 Annual Report emphasized the imminent depletion of the OASI Trust Fund and indicated that loans from the DI and HI Trust Funds would be necessary in the second half of 1982 in order to make OASI benefit payments on time. In November and December 1982, in fact, loans were made to the OASI Trust Fund amounting to $17.5 billion — $5.1 billion from the DI Trust Fund and $12.4 billion from the HI Trust Fund. These amounts were intended to be sufficient to enable the timely payment of OASI benefits through June 1983, by which time it was anticipated that corrective legislation could be enacted. As described previously, the Social Security Amendments of 1983 were enacted on April 20, 1983, and have resulted in a substantial improvement in the financial outlook for the OASDI program. The differences between the estimates shown in this report and those shown in the 1982 report also reflect the net effects of (1) actual economic experience in 1982, which was worse than had been anticipated, and (2) changes in assumed economic growth rates in 1983-87.

Under the four alternative sets of assumptions used in this report, the OASI and DI Trust Funds would be able to make benefit payments on time throughout the short-range projection period. As discussed below, however, the assets of both trust funds would remain at low levels, relative to annual expenditures, through about 1987 under each set of assumptions.

The 1983 amendments included provisions requiring, under certain conditions, the automatic repayment of some or all of the amounts loaned to the OASI Trust Fund in 1982 (see section V). Under alternatives I, II-A, and II-B, growth in OASI Trust Fund assets would be sufficient to trigger the repayment process during 1984-87. Under alternative I, the amounts loaned to the OASI Trust Fund from the HI Trust Fund would be required by law to be fully repaid within this period. The growth in OASI assets under alternatives II-A and II-B would be sufficient to require partial repayment of the HI loans by the end of 1987, and the balance in 1988. Under alternative III, however, growth in OASI assets would be too slow to trigger the automatic repayment requirements prior to 1988.

In addition to the automatic requirements, the 1983 amendments specify that any interfund loans "shall be repaid at the earliest feasible date." In practice, this provision allows the Managing Trustee some discretion in the timing and amounts of the repayment, subject to the minimum standards of the automatic requirements. For purposes of calculating the estimated trust fund operations in this report and the concurrent 1983 Annual Report for the HI Trust Fund, repayment of interfund loans is assumed to occur according to the automatic requirements only, unless (1) faster repayment is required to prevent or postpone the depletion of the HI Trust Fund, and (2) the assets of the OASI Trust Fund are sufficient to allow both the faster repayment of interfund loans and the timely payment of OASI benefits.

Under the alternative III assumptions, and in the absence of any repayment of interfund loans, the HI Trust Fund would be depleted in 1987. Consequently, it has been assumed that OASI would repay in 1987 the full $12.4 billion owed to the HI Trust Fund. (Under alternative III, OASI assets would be sufficient to permit such repayment without affecting the timely payment of OASI benefits.) This repayment would delay the depletion of the HI Trust Fund until 1988.

The 1983 amendments contain a provision to stabilize OASDI benefit increases in periods when trust fund assets are at low levels and increases in the Consumer Price Index exceed increases in average wages. As indicated in the section on "Automatic Adjustments," this provision would be triggered under alternative III and would limit the benefit increases otherwise payable in December of 1984, 1985, and 1986. In the absence of this provision, the OASI and DI Trust Funds would be unable to pay benefits on time beginning in 1987 under the alternative III assumptions. As a result of the provision, however, the timely payment of benefits would be possible, and subsequent trust fund growth in 1988 and later would allow "catch-up" benefit increases in 1990 for those beneficiaries whose benefit increases had been restricted in 1984-86. Thus, during conditions of slow economic growth and high inflation, as assumed in alternative III, the stabilizer provision could prevent the depletion of the trust funds. Under other types of adverse conditions, however, such as high unemployment and slow growth in both wages and prices, the trust funds could experience serious financial problems in the near future.

At this time the recovery from the 1981-82 recession appears to be well under way. As indicated by the alternative projections, under most economic conditions the trust funds are expected to operate satisfactorily. Until the anticipated growth in assets during the late 1980's has actually occurred, however, the OASDI program will remain vulnerable to a severe economic downturn.

OASI Trust Fund operations

Estimates of the operations and status of the OASI Trust Fund during calendar years 1983-87 are shown in table 12 for each of the four alternative sets of assumptions that were described in the preceding sections. Actual data for calendar year 1982 are also shown in the table. Under each alternative, it is assumed that employment and earnings will increase in every year through 1987. The number of persons with taxable earnings under the OASDI program is expected to increase under alternatives I, II-A, II-B, and III, from 115 million during calendar year 1982 to about 131 million, 130 million, 129 million, and 127 million, respectively, by 1987. The total annual amount of taxable earnings is expected to increase from $1,364 billion in 1982 to $2,021 billion, $1,972 billion, $1,982 billion, and $2,017 billion, in 1987, under alternatives I, II-A, II-B, and III, respectively. (In 1982 dollars—taking account of assumed increases in the CPI from 1982 to 1987 under each alternative—the estimated amounts of taxable earnings in 1987 are $1,730 billion, $1,667 billion, $1,598 billion, and $1,497 billion, under alternatives I, II-A, II-B, and III, respectively.) These increases are due in part to the increases in the contribution and benefit base assumed to occur in 1983-87 under the automatic provisions. The increases in taxable earnings are also due to (1) projected increases in employment levels and average earnings in covered employment, and (2) various provisions in the Social Security Amendments of 1983, including the extensions of coverage, beginning in 1984, to all newly hired Federal civilian employees and all employees of nonprofit organizations.

TABLE 12.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND DURING CALENDAR YEARS 1982-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS

[Amounts in billions]

Calendar year	Income	Disbursements	Interfund borrowing transfers[1]	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year[2]
1982[3]	$125.2	$142.1	$17.5	$0.6	$22.1	15
Alternative I:						
1983	151.6	151.5	—	.1	22.2	15
1984	165.9	162.0	-1.0	2.9	25.1	21
1985	183.4	172.7	-1.6	9.1	34.2	22
1986	199.3	184.6	-9.1	5.6	39.8	26
1987	215.7	195.8	-.7	19.2	58.9	28
Alternative II-A:						
1983	151.5	151.6	—	-.2	21.9	15
1984	164.9	162.3	-.6	2.0	23.9	20
1985	180.6	173.7	—	6.9	30.8	21
1986	194.8	186.4	-4.8	3.6	34.4	24
1987	209.9	198.3	-6.8	4.8	39.2	25
Alternative II-B:						
1983	151.4	151.6	—	-.3	21.8	15
1984	163.9	162.3	-.5	1.0	22.8	20
1985	180.4	175.2	—	5.2	28.1	20
1986	194.9	190.2	-1.1	3.6	31.7	22
1987	210.2	204.6	-2.4	3.2	34.9	23
Alternative III:						
1983	150.3	151.7	—	-1.4	20.6	15
1984	159.6	162.5	—	-2.9	17.7	19
1985	177.5	174.5	—	3.0	20.7	17
1986	195.2	187.3	—	7.9	28.6	18
1987	213.5	206.3	-12.4	-5.2	23.4	21

[1] Positive figure represents amounts borrowed by the OASI Trust Fund from the DI and HI Trust Funds. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[2] Assets at the beginning of the year are defined as the sum of assets at the end of the prior year plus advance tax transfers for January.

[3] Figures for 1982 represent actual experience.

Note: Totals do not necessarily equal the sum of rounded components. The major assumptions underlying the estimates are described in the preceding sections and are shown in tables 10 and 11.

The rise in estimated income shown in table 12 under each set of assumptions reflects the increases in estimated taxable earnings under the different alternatives, as described above. In addition, the estimated income to the fund is affected by the scheduled changes in contribution rates and the effects of the 1983 amendments.

Rising disbursements during calendar years 1983-87 reflect the effects of the assumed future automatic benefit increases previously shown, as well as the long-range upward trend in the numbers of beneficiaries and in the amounts of average monthly earnings underlying benefits payable under the program. The growth in the number of beneficiaries in the past and the expected growth in the future result partly from the increase in the aged population and partly from two other factors—(1) in each succeeding year a larger proportion of the persons attaining age 62 are eligible for benefits and (2) the amendments during the period 1950-83 modified the eligibility provisions and extended coverage to additional categories of employment. On the other hand, this growth will be reduced somewhat by the effects of the Omnibus Budget Reconciliation Act of 1981.

There has also been, and will continue to be, a growth in the proportion of eligible persons who receive benefits. This growth is due to several factors, among which are (1) the amendments enacted during the period 1950-83 which affect the conditions governing the receipt of benefits and (2) the increasing percentage of eligible persons who are aged 70 and over and who therefore receive benefits regardless of earnings. As indicated in the previous section, the age at which eligible persons may begin to receive full benefits regardless of earnings was reduced from 72 to 70 beginning in 1983.

Under the two intermediate sets of assumptions, the estimates shown in table 12 indicate that income would exceed disbursements in every year after 1983. Under alternative I, income is estimated to exceed outgo in every year, and under alternative III, in every year after 1984. The assets of the OASI Trust Fund at the beginning of 1982 were equal to about 15 percent of the fund's disbursements in 1982. During 1982, disbursements exceeded income by $16.9 billion, and $17.5 billion was borrowed from the DI and HI Trust Funds at the end of the year. The assets of the OASI Trust Fund, including the borrowed amounts, again represented about 15 percent of estimated annual expenditures at the beginning of 1983. By the beginning of 1984, this percentage is estimated to increase to between 19 and 21 percent depending on actual economic conditions during the balance of 1983. This increase may seem contradictory, because expenditures are expected to exceed income during 1983 (except under alternative I). The explanation is that at the beginning of 1984, tax income for the month of January will be transferred to the trust fund on the first day of the month and will thus be available for the payment of benefits. As such, the advance tax transfer is reflected in assets at the beginning of the year. This provision, which was included in the Social Security Amendments of 1983, became effective in May 1983.

Assets are estimated to remain at roughly 20-25 percent of annual expenditures throughout the rest of the short-range projection period. This is a relatively low level, and it could limit the trust fund's ability to act as a contingency reserve during this period in the event of a significant economic downturn. In interpreting the trust fund ratios in table 12, it should be noted that at the beginning of any month, assets of at least 8-9 percent of annual expenditures are required to make the benefit payments that are due, generally, on the third day of the month. Therefore the difference between the estimated assets as a percentage of expenditures shown above, and the 8-9 percent minimum level, represents the reserve available to handle adverse contingencies.

DI Trust Fund operations

The estimated operations and status of the DI Trust Fund during calendar years 1983-87 under the four sets of assumptions are shown in table 13, together with figures on actual experience in 1982. Income will decrease initially from its level in 1982 as a result of the scheduled reductions in the combined employee-employer contribution rate allocated for DI, and accompanying decreases in contribution rates for self-employed persons. Income will increase after 1984 under each alternative, reflecting the same factors, insofar as they apply to income to the DI Trust Fund, that are reflected in the increase in income to the OASI Trust Fund during the same period.

Disbursements will increase because of automatic benefit increases and because of projected increases in the amounts of average monthly earnings on which benefits are based. These effects are offset, somewhat, by projected decreases in the numbers of beneficiaries. Since about 1978, the number of persons receiving benefits under the DI program has been declining. A continuing decline in the number of beneficiaries is projected for the next several years under all four sets of assumptions, reflecting the combined effects of (1) projected disability incidence rates that are somewhat lower than those of the last decade and (2) projected termination rates that are somewhat higher than those of the last decade. The higher termination rates reflect, in part, the increased reviews of the continuing eligibility of disabled beneficiaries, which are required by the Social Security Disability Amendments of 1980 (Public Law 96-265).

In 1982, $5.1 billion was loaned from the DI Trust Fund to the OASI Trust Fund. This amount represented somewhat more than the excess of income over outgo experienced by the DI Trust Fund during 1982. The net effect on the assets of the DI fund, as a percentage of annual expenditures, was to cause a decrease from 17 percent at the beginning of 1982 to 15 percent at the beginning of 1983. As a percentage of expenditures, the assets of the DI Trust Fund are projected to recover substantially during 1983, primarily as a result of the lump-sum transfers from the general fund of the Treasury for noncontributory military service wage credits. During 1984-87, assets are projected to remain fairly level in the range of 25-40 percent of annual expenditures depending on the particular assumptions.

TABLE 13.—ESTIMATED OPERATIONS OF THE DI TRUST FUND DURING CALENDAR YEARS 1982-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS

[Amounts in billions]

Calendar year	Income	Disbursements	Interfund borrowing transfers[1]	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year[2]
1982[3]	$22.7	$16.0	-$5.1	-$0.4	$2.7	17
Alternative I:						
1983	20.9	17.8	—	3.0	5.7	15
1984	17.3	17.9	—	-.6	5.1	30
1985	18.6	18.3	—	.3	5.4	28
1986	20.0	18.9	—	1.1	6.5	35
1987	21.6	19.6	—	2.0	8.5	40
Alternative II-A:						
1983	20.9	17.9	—	3.0	5.7	15
1984	17.2	18.0	—	-.8	4.9	30
1985	18.3	18.5	—	-.2	4.7	33
1986	19.6	19.2	—	.3	5.1	31
1987	21.0	20.0	—	1.0	6.0	32
Alternative II-B:						
1983	20.9	17.9	—	3.0	5.7	15
1984	17.1	18.0	—	-.9	4.8	38
1985	18.3	18.6	—	-.4	4.4	32
1986	19.6	19.6	—	(4)	4.4	29
1987	21.0	20.6	—	.4	4.8	28
Alternative III:						
1983	20.7	17.9	—	2.8	5.5	15
1984	16.7	18.0	—	-1.4	4.2	37
1985	18.0	18.6	—	-.7	3.5	29
1986	19.6	19.5	—	.1	3.6	25
1987	21.3	21.1	—	.2	3.8	24

[1] Negative figure represents amounts loaned from the DI Trust Fund to the OASI Trust Fund. Repayment of amounts borrowed from the DI Trust Fund is assumed to occur in 1988 under alternative I and in 1989 under alternatives II-A, II-B, and III.

[2] See footnote 2 of table 12.

[3] See footnote 3 of table 12.

[4] Between $0 and -$50 million.

Note: Totals do not necessarily equal the sum of rounded components. The assumptions underlying the estimates are described in the preceding sections and are shown in tables 10 and 11.

Combined OASI and DI Trust Fund operations

The estimated operations and status of the OASI and DI Trust Funds, combined, during calendar years 1983-87 under the four alternatives, are shown in table 14 together with figures on actual experience in 1982. These figures are the sums of the corresponding figures shown in tables 12 and 13.

TABLE 14.—ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING CALENDAR YEARS 1982-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS

[Amounts in billions]

Calendar year	Income	Disbursements	Interfund borrowing transfers[1]	Net increase in funds	Funds at end of year	Funds at beginning of year as a percentage of disbursements during year[3]
1982[2]	$147.9	$160.1	$12.4	$0.2	$24.8	15
Alternative I:						
1983	172.5	169.3	—	3.1	27.9	15
1984	183.2	179.9	-1.0	2.3	30.2	22
1985	202.0	191.0	-1.6	9.4	39.6	23
1986	219.3	203.6	-9.1	6.7	46.2	27
1987	237.3	215.4	-.7	21.2	67.4	29
Alternative II-A:						
1983	172.3	169.5	—	2.8	27.6	15
1984	182.1	180.3	-.6	1.2	28.8	22
1985	198.9	192.2	—	6.8	35.6	22
1986	214.3	205.6	-4.8	3.9	39.5	25
1987	230.9	218.3	-6.8	5.8	45.3	25
Alternative II-B:						
1983	172.2	169.5	—	2.7	27.5	15
1984	180.9	180.3	-.5	.1	27.6	22
1985	198.7	193.8	—	4.9	32.5	21
1986	214.5	209.9	-1.1	3.6	36.1	23
1987	231.2	225.2	-2.4	3.6	39.7	23
Alternative III:						
1983	171.0	169.6	—	[illegible]	26.2	15
1984	176.3	180.5	—	[illegible]	21.9	21
1985	195.5	193.2	—	[illegible]	24.2	18
1986	214.8	206.8	—	8.0	32.2	19
1987	234.8	227.4	-12.4	-5.0	27.2	21

[1] Positive figure represents amounts loaned from the HI Trust Fund to the OASI Trust Fund. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[2] See footnote 2 of table 12.

[3] See footnote 3 of table 12.

Note: Totals do not necessarily equal the sum of rounded components. The assumptions underlying the estimates are described in the preceding sections and are shown in tables 10 and 11.

At the beginning of 1982, the assets of the combined OASI and DI Trust Funds were equal to 15 percent of the disbursements in 1982, as shown in table 14. During 1982, $12.4 billion was loaned to the OASI Fund from the HI Trust Fund. This amount approximately offset the combined net shortfall of OASDI outgo over income in 1982. By the beginning of 1983, combined assets again represented 15 percent of the expenditures in 1983 as estimated under each of the four alternatives. The combined funds are projected to be in the range of roughly 20-25 percent of combined expenditures through 1987.

As in last year's report, the amounts loaned to the OASI Trust Fund from the DI and HI Trust Funds are included in the invested assets of the OASI Trust Fund. This procedure is followed because such amounts are readily available for the payment of benefits and thus should be considered when determining the ability of the OASI program to meet its benefit payment obligations. Similarly, the interfund loans from the DI and HI Trust Funds are not included in DI or HI assets, since these amounts are not readily available for the payment of DI or HI benefits.

It can be argued that a more proper accounting treatment would be to exclude interfund loans from the borrowing fund's assets and to include them in the assets of the lending funds. This "net value" basis would recognize the obligation of the OASI Trust Fund to repay the amounts borrowed and would reflect the fact that, to the lending funds, such amounts are investments for which interest is received and return of principal is promised. While these are sound arguments, the existing treatment is used to facilitate the evaluation of the trust funds' actual cash operations—in particular, whether sufficient invested assets (borrowed or otherwise) are available at the beginning of any given month to pay the benefits for that month.

For informational purposes, table 15 presents (1) the estimated assets of the OASI and DI Trust Funds, as shown elsewhere in this report, (2) the amount of loans outstanding, and (3) the "net value" of trust fund assets. For the OASI Trust Fund, this last figure represents invested assets plus cash balances less amounts borrowed. For the DI Trust Fund, the "net value" represents invested assets plus cash balances plus amounts loaned. Figures are shown at the end of each calendar year 1981-87 on the basis of the four sets of assumptions. As indicated, the "net value" of the OASI Trust Fund is very low at this time and will remain so for several years. It should be emphasized, however, that the low "net values" do not imply an inability to pay benefits on time, for the reasons described in the prior paragraphs. The "net value" of the DI Trust Fund, as indicated in table 15, exceeds the level of DI assets as regularly defined. Under certain conditions, however, it would be possible for the DI program to be unable to pay benefits on time, even though the "net value" of the DI Trust Fund might be relatively large. Thus the "net value" is not particularly useful as an indicator of a trust fund's ability to operate satisfactorily, although it may be of interest as an additional indicator of the trust fund's underlying financial status.

TABLE 15.—ESTIMATED ASSETS, INTERFUND LOANS OUTSTANDING, AND "NET VALUES" OF THE OASI AND DI TRUST FUNDS AT THE END OF CALENDAR YEARS 1981-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS

[In billions]

Calendar year	OASI Trust Fund			DI Trust Fund		
	Assets[1]	Outstanding amounts borrowed[2]	"Net value"[3]	Assets[1]	Outstanding amounts loaned[4]	"Net value"[5]
1981[6]	$21.5	—	$21.5	$3.0	—	$3.0
1982[6]	22.1	$17.5	4.6	2.7	$5.1	7.8
Alternative I:						
1983	22.2	17.5	4.7	5.7	5.1	10.8
1984	25.1	16.5	8.6	5.1	5.1	10.2
1985	34.2	14.9	19.3	5.4	5.1	10.4
1986	39.8	5.8	33.9	6.5	5.1	11.5
1987	58.9	5.1	53.8	8.5	5.1	13.6
Alternative II-A:						
1983	21.9	17.5	4.4	5.7	5.1	10.8
1984	23.9	16.9	7.0	4.9	5.1	10.0
1985	30.8	16.9	13.9	4.7	5.1	9.8
1986	34.4	12.1	22.3	5.1	5.1	10.2
1987	39.2	5.3	33.9	6.0	5.1	11.1
Alternative II-B:						
1983	21.8	17.5	4.3	5.7	5.1	10.8
1984	22.8	17.0	5.8	4.8	5.1	9.9
1985	28.1	17.0	11.1	4.4	5.1	9.5
1986	31.7	15.9	15.8	4.4	5.1	9.5
1987	34.9	13.5	21.3	4.8	5.1	9.9

TABLE 15.—ESTIMATED ASSETS, INTERFUND LOANS OUTSTANDING, AND "NET VALUES" OF THE OASI AND DI TRUST FUNDS AT THE END OF CALENDAR YEARS 1981-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS (Cont.)

[In billions]

Calendar year	OASI Trust Fund			DI Trust Fund		
	Assets[1]	Outstanding amounts borrowed[2]	"Net value"[3]	Assets[1]	Outstanding amounts loaned[4]	"Net value"[3]
Alternative III:						
1983	$20.6	$17.5	$3.1	$5.5	$5.1	$10.6
1984	17.7	17.5	.2	4.2	5.1	9.3
1985	20.7	17.5	3.2	3.5	5.1	8.6
1986	28.6	17.5	11.1	3.6	5.1	8.7
1987	23.4	5.1	18.3	3.8	5.1	8.9

[1] Represents invested assets plus cash balance at end of year.

[2] Represents total amounts borrowed from DI and HI Trust Funds less repayments made by end of calendar year.

[3] See text for description of "net value."

[4] Represents total amounts loaned to OASI Trust Fund less repayments made by end of calendar year.

[5] Figures for 1981 and 1982 represent actual experience.

Note: Totals do not necessarily equal the sum of rounded components. The major assumptions underlying these estimates are described in the preceding sections and are shown in tables 10 and 11.

Assets as a percentage of annual expenditures for selected years prior to 1983 are shown in table 16 for both funds combined and for each fund separately.

TABLE 16.—ASSETS AT THE BEGINNING OF THE YEAR AS A PERCENTAGE OF EXPENDITURES DURING THE YEAR, FOR THE OASDI PROGRAM, BY TRUST FUND, FOR SELECTED CALENDAR YEARS 1950-82

Calendar year	OASI and DI Trust Funds, combined	OASI Trust Fund	DI Trust Fund
1950	1,156	1,156	—
1955	405	405	—
1960	186	180	304
1965	110	109	121
1970	103	101	126
1975	66	63	92
1976	57	54	71
1977	47	47	48
1978	37	39	26
1979	30	30	30
1980	25	23	35
1981	18	18	21
1982	15	15	17

Expenditures in calendar year 1982 from both trust funds, combined, were 11.94 percent of taxable payroll for the year—1.08 percentage points more than the total income rate of 10.85 percent. The cost rates for both trust funds, combined, are estimated to decrease somewhat in 1983 under each alternative. Most of this initial decrease is attributable to the lump-sum transfer from the general fund of the Treasury in 1983, representing the amounts of payroll taxes that would have been paid on deemed military service wage credits in 1957-83 if such credits had been treated as covered earnings. As described previously, such credits have been included in covered payroll. In 1983, the effect of this procedure is a significant reduction in the ratio of expenditures to taxable payroll, due to the increase in payroll described.

Under alternatives I, II-A, and II-B, cost rates are estimated to decline slowly in 1984-87, reaching 10.68 percent, 11.09 percent, and 11.39 percent, respectively, in 1987. Under alternative III, cost rates would increase slightly from their level in 1983 but then decline to a somewhat lower level by 1987. These percentages are shown in table 17 for both trust funds, combined, and for each trust fund separately. Table 17 also shows a comparison of the cost rates with the corresponding total income rates. As explained previously, the total income rate represents the sum of the combined employee-employer payroll tax rate and the income derived from the Federal income taxation of OASDI benefits, expressed as a percentage of effective taxable payroll. In 1983, the total income rate also includes the lump-sum payment from the general fund of the Treasury for the cost of military service wage credits for service performed prior to 1957.

TABLE 17.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI AND DI TRUST FUNDS FOR CALENDAR YEARS 1982-87 UNDER FOUR ALTERNATIVE SETS OF ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar year	OASI Trust Fund			DI Trust Fund			OASI and DI Trust Funds, combined		
	Cost rate	Total income rate	Balance	Cost rate	Total income rate	Balance	Cost rate	Total income rate	Balance
1982[1]	10.59	9.19	-1.40	1.34	1.66	0.32	11.94	10.85	-1.08
Alternative I:									
1983	10.25	9.92	-.34	1.21	1.33	.12	11.46	11.24	-.22
1984	10.16	10.55	.39	1.12	1.02	-.11	11.28	11.56	.29
1985	9.95	10.56	.61	1.05	1.02	-.04	11.01	11.58	.57
1986	9.86	10.58	.72	1.01	1.02	.01	10.87	11.60	.72
1987	9.71	10.59	.88	.97	1.02	.05	10.68	11.61	.93
Alternative II-A:									
1983	10.28	9.92	-.36	1.21	1.33	.12	11.49	11.24	-.24
1984	10.24	10.55	.31	1.13	1.02	-.12	11.37	11.57	.19
1985	10.15	10.56	.41	1.08	1.02	-.06	11.24	11.58	.35
1986	10.16	10.58	.43	1.05	1.02	-.03	11.20	11.60	.40
1987	10.08	10.60	.53	1.02	1.02	(2)	11.09	11.62	.53
Alternative II-B:									
1983	10.28	9.92	-.36	1.21	1.33	.12	11.49	11.24	-.24
1984	10.30	10.55	.25	1.14	1.02	-.12	11.44	11.57	.12
1985	10.24	10.57	.32	1.09	1.02	-.07	11.33	11.58	.25
1986	10.34	10.59	.25	1.07	1.02	-.05	11.40	11.60	.20
1987	10.35	10.61	.26	1.04	1.02	-.02	11.39	11.63	.24
Alternative III:									
1983	10.39	9.92	-.47	1.22	1.33	.10	11.62	11.25	-.37
1984	10.57	10.55	-.02	1.17	1.02	-.15	11.75	11.57	-.18
1985	10.33	10.57	.24	1.10	1.02	-.09	11.43	11.58	.16
1986	10.13	10.58	.46	1.05	1.02	-.04	11.18	11.60	.42
1987	10.25	10.60	.35	1.05	1.02	-.03	11.30	11.63	.33

[1] Percentages for 1982, though based on actual experience, are preliminary and subject to revision.

[2] Between 0 percent and 0.005 percent.

Note: The definitions of alternatives I, II-A, II-B, and III, and the terms cost rate, total income rate, balance, and taxable payroll, are provided in the text.

Cost rates for years prior to 1983 are shown in table 18.

TABLE 18.—COST RATES FOR THE OASI AND DI PROGRAMS FOR SELECTED CALENDAR YEARS 1950-82[1]

Calendar year	OASI and DI Trust Funds, combined	OASI Trust Fund	DI Trust Fund
1950	1.17	1.17	—
1955	3.34	3.34	—
1960	5.89	5.59	0.30
1965	7.93	7.23	.70
1970	8.12	7.32	.81
1975	10.65	9.29	1.36
1976	10.86	9.42	1.44
1977	10.97	9.46	1.50
1978	10.74	9.29	1.45
1979	10.26	8.90	1.36
1980	10.75	9.36	1.38
1981	11.30	9.92	1.38
1982	11.94	10.59	1.34

[1] For 1978-82, percentages are preliminary and subject to revision.

Note: Totals do not necessarily equal the sum of rounded components.

As stated previously, estimates of the operations of the trust funds during calendar years 1983-87 have been presented in the preceding tables of this section under four different sets of economic assumptions because of the uncertainty of future economic developments. Under the provisions of the Social Security Act, it is required that estimates of the expected operations and status of the trust funds during the next 5 fiscal years be shown in this report. Accordingly, detailed estimates of the expected operations and status of the trust funds during each fiscal year 1983-87 are shown in the remaining tables of this section for the two intermediate sets of assumptions (alternatives II-A and II-B) only. Similar detailed estimates are also shown on a calendar-year basis for 1983-87.

Data on the actual operations of the OASI Trust Fund for selected years during 1940-82, and estimates of the expected operations of the trust fund during 1983-87 under the intermediate sets of assumptions, are shown in tables 19 and 20 on a fiscal- and calendar-year basis, respectively. Corresponding figures on the operations of the DI Trust Fund are shown in tables 21 and 22. Operations of both trust funds combined are shown in tables 23 and 24.[1]

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[1] Data relating to the operations of the two trust funds for years not shown in tables 19-24 are contained in earlier annual reports.

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TABLE 19.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED FISCAL YEARS 1940-82 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

Fiscal year[1]	Income					Disbursements				Interfund borrowing transfers[6]	Net increase in fund	Fund at end of period
	Total	Net contributions[2]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement Account			
Past experience:												
1940	$592	$550	—	—	$42	$28	$16	$12	—	—	$564	$1,745
1945	1,434	1,310	—	—	124	267	240	27	—	—	1,167	6,613
1950	2,367	2,106	—	$4	257	784	727	57	—	—	1,583	12,893
1955	5,525	5,087	—	—	438	4,427	4,333	103	-$10	—	1,098	21,141
1960	10,360	9,843	—	—	517	11,073	10,270	202	600	—	-713	20,829
1965	16,443	15,857	—	—	586	15,962	15,226	300	436	—	482	20,180
1970	31,746	29,955	—	442	1,350	27,321	26,268	474	579	—	4,425	32,616
1975	58,757	56,017	—	447	2,292	56,676	54,847	848	982	—	2,081	39,948
1976	62,327	59,555	—	425	2,347	64,295	62,148	935	1,212	—	-1,968	37,980
July-Sept. 1976	16,186	16,106	—	—	80	17,111	16,877	234	—	—	-925	37,055
1977	71,796	68,895	—	614	2,287	73,479	71,278	993	1,208	—	-1,683	35,372
1978	76,811	74,047	—	613	2,152	81,205	78,531	1,066	1,589	—	-4,394	30,978
1979	86,893	84,358	—	615	1,920	90,128	87,609	1,072	1,448	—	-3,235	27,743
1980	100,051	97,608	—	557	1,886	103,228	100,626	1,160	1,442	—	-3,177	24,566
1981	121,572	119,016	—	540	2,016	122,304	119,421	1,298	1,585	—	-732	23,834
1982	126,629	124,248	—	675	1,708	137,928	134,661	1,474	1,793	—	-11,299	12,535
Estimated future experience:[7]												
Alternative II-A:												
1983	149,286	136,500	—	6,096	6,689	151,210	147,352	1,607	2,251	$17,519	15,594	28,129
1984	158,128	156,079	$1,763	125	162	159,656	155,542	1,724	2,390	-600	-2,128	26,001
1985	177,556	174,511	2,688	102	254	170,834	166,581	1,850	2,403	—	6,722	32,723
1986	191,478	187,422	3,206	82	768	183,273	178,950	1,924	2,399	-4,800	3,405	36,129
1987	205,735	200,390	3,793	68	1,484	195,276	190,791	2,032	2,454	-6,800	3,658	39,787
Alternative II-B:												
1983	149,284	136,500	—	6,096	6,688	151,211	147,353	1,607	2,251	17,519	15,592	28,127
1984	157,211	155,163	1,763	125	160	159,658	155,546	1,724	2,388	-500	-2,947	25,180
1985	177,081	174,108	2,706	103	164	171,944	167,675	1,854	2,415	—	5,137	30,317
1986	191,785	187,909	3,265	82	530	186,547	182,168	1,936	2,443	-1,100	4,138	34,455
1987	206,114	201,241	3,904	69	900	200,987	196,398	2,053	2,536	-2,400	2,728	37,181

See following page for footnotes.

[1] Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. The act further provides that the calendar quarter July-September 1976 is a period of transition from fiscal year 1976, which ended on June 30, 1976, to fiscal year 1977, which began on October 1, 1976.

[2] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,388 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[3] Includes reimbursements (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of noncontributory wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain noninsured persons who attained age 72 before 1968. The amount shown for 1978 also includes $2,724,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[4] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $6,943 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[5] Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $720 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6] Positive figure represents amounts borrowed by the OASI Trust Fund from the DI and HI Trust Funds. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[7] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

TABLE 20.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED CALENDAR YEARS 1940-82 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Calendar year	Total	Net contributions[1]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement Account	Interfund borrowing transfers[5]	Net increase in fund	Fund at end of period
Past experience:												
1940	$368	$325	—	—	$43	$62	$35	$26	—	—	$306	$2,031
1945	1,420	1,285	—	—	134	304	274	30	—	—	1,116	7,121
1950	2,928	2,667	—	$4	257	1,022	961	61	—	—	1,905	13,721
1955	6,167	5,713	—	—	454	5,079	4,968	119	-$7	—	1,087	21,663
1960	11,382	10,866	—	—	516	11,198	10,677	203	318	—	184	20,324
1965	16,610	16,017	—	—	593	17,501	16,737	328	436	—	-890	18,235
1970	32,220	30,256	—	449	1,515	29,848	28,798	471	579	—	2,371	32,454
1975	59,605	56,816	—	425	2,364	60,395	58,517	896	982	—	-790	36,987
1976	66,276	63,362	—	614	2,301	67,876	65,705	959	1,212	—	-1,600	35,388
1977	72,412	69,572	—	613	2,227	75,309	73,121	981	1,208	—	-2,897	32,491
1978	78,094	75,471	—	615	2,008	83,064	80,361	1,115	1,589	—	-4,971	27,520
1979	90,274	87,919	—	557	1,797	93,133	90,573	1,113	1,448	—	-2,860	24,660
1980	105,841	103,456	—	540	1,845	107,678	105,083	1,154	1,442	—	-1,837	22,823
1981	125,361	122,627	—	675	2,060	126,695	123,803	1,307	1,585	—	-1,334	21,490
1982	125,198	123,673	—	680	845	142,119	138,806	1,519	1,793	$17,519	598	22,088
Estimated future experience[6]:												
Alternative II-A:												
1983	151,475	138,889	—	5,541	7,046	151,647	147,759	1,637	2,251	—	-172	21,916
1984	164,890	162,319	$2,357	102	112	162,321	158,176	1,753	2,390	-600	1,969	23,885
1985	180,637	177,302	2,801	82	453	173,696	169,428	1,867	2,403	—	6,942	30,826
1986	194,762	190,248	3,341	68	1,106	186,378	182,030	1,949	2,399	-4,800	3,584	34,411
1987	209,884	203,961	3,945	56	1,922	198,272	193,761	2,058	2,454	-6,800	4,812	39,222
Alternative II-B:												
1983	151,366	138,769	—	5,541	7,057	151,649	147,761	1,637	2,251	—	-283	21,805
1984	163,864	161,331	2,357	103	73	162,326	158,184	1,754	2,388	-500	1,037	22,842
1985	180,421	177,179	2,825	82	335	175,174	170,886	1,873	2,415	—	5,247	28,090
1986	194,937	190,747	3,410	69	710	190,239	185,833	1,963	2,443	-1,100	3,598	31,688
1987	210,163	204,927	4,071	58	1,107	204,591	199,973	2,062	2,536	-2,400	3,172	34,860

See following page for footnotes.

[1] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,388 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[2] Includes reimbursements (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of noncontributory wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain noninsured persons who attained age 72 before 1968. The amount shown for 1977 also includes $2,724,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[3] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $6,943 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[4] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $720 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5] Positive figure represents amounts borrowed by the OASI Trust Fund from the DI and HI Trust Funds. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[6] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

TABLE 21.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED FISCAL YEARS 1960-82 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Fiscal year[1]	Total	Net contributions[2]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement Account	Interfund borrowing transfers[7]	Net increase in fund	Fund at end of period
Past experience:												
1960	$1,034	$987	—	—	$47	$533	$528	$32	-$27	—	$501	$2,167
1965	1,237	1,175	—	—	62	1,495	1,392	79	24	—	-257	2,007
1970	4,380	4,141	—	$16	223	2,954	2,795	149	10	—	1,428	5,104
1975	7,920	7,356	—	52	512	7,982	7,701	253	29	—	-62	8,191
1976	8,355	7,797	—	90	466	9,606	9,314	266	26	—	-1,251	6,939
July-Sept. 1976	2,172	2,159	—	—	13	2,653	2,582	71	—	—	-481	6,459
1977	9,374	8,900	—	103	372	11,590	11,212	378	(6)	—	-2,215	4,243
1978	12,784	12,404	—	128	251	12,655	12,296	327	30	—	129	4,372
1979	15,196	14,750	—	142	305	13,944	13,507	407	30	—	1,252	5,624
1980	17,376	16,805	—	118	453	15,320	14,998	334	-12	—	2,056	7,680
1981	12,993	12,589	—	130	273	17,280	16,846	405	29	—	-4,288	3,392
1982	21,396	20,866	—	168	363	18,035	17,437	572	26	—	3,363	6,755
Estimated future experience:[8]												
Alternative II-A:												
1983	21,835	19,155	—	1,295	1,385	18,015	17,322	665	28	-$5,081	-1,262	5,493
1984	17,605	16,375	$204	—	1,025	17,905	17,129	697	79	—	-300	5,193
1985	18,043	16,781	299	—	963	18,323	17,480	729	114	—	-280	4,913
1986	19,299	18,025	340	—	934	19,045	18,176	766	101	—	254	5,168
1987	20,605	19,270	388	—	947	19,816	18,904	810	102	—	788	5,956
Alternative II-B:												
1983	21,837	19,157	—	1,295	1,384	18,015	17,322	665	28	-5,081	-1,260	5,496
1984	17,512	16,280	204	—	1,027	17,911	17,134	697	79	—	-399	5,098
1985	17,987	16,741	301	—	954	18,448	17,602	732	114	—	-451	4,646
1986	19,327	18,070	346	—	911	19,372	18,496	773	103	—	-45	4,601
1987	20,649	19,351	399	—	899	20,337	19,408	822	107	—	311	4,912

See following page for footnotes.

[1] Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. The act further provides that the calendar quarter July-September 1976 is a period of transition from fiscal year 1976, which ended on June 30, 1976, to fiscal year 1977, which began on October 1, 1976.

[2] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $402 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[3] Includes reimbursements (1) in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1972-83, for costs of noncontributory wage credits for military service performed after 1956. The amount shown for 1978 also includes $3,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[4] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $690 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[5] Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $80 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6] Negative figure represents amounts loaned by the DI Trust Fund to the OASI Trust Fund. It is assumed that repayment of these loans would not occur until 1989.

[7] Less than $500,000 was transferred from the Railroad Retirement Account to the DI Trust Fund.

[8] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

TABLE 22.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED CALENDAR YEARS 1960-82 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Calendar year	Total	Net contributions[1]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement Account	Interfund borrowing transfers[5]	Net increase in fund	Fund at end of period
Past experience:												
1960	$1,063	$1,010	—	—	$53	$600	$568	$36	-$5	—	$464	$2,289
1965	1,247	1,188	—	—	59	1,687	1,573	90	24	—	-440	1,606
1970	4,774	4,481	—	$16	277	3,259	3,085	164	10	—	1,514	5,614
1975	8,035	7,444	—	90	502	8,790	8,505	256	29	—	-754	7,354
1976	8,757	8,233	—	103	422	10,366	10,055	285	26	—	-1,609	5,745
1977	9,570	9,138	—	128	304	11,945	11,547	399	(8)	—	-2,375	3,370
1978	13,810	13,413	—	142	256	12,954	12,599	325	30	—	856	4,226
1979	15,590	15,114	—	118	358	14,186	13,786	371	30	—	1,404	5,630
1980	13,871	13,255	—	130	485	15,872	15,515	368	-12	—	-2,001	3,629
1981	17,078	16,738	—	168	172	17,658	17,192	436	29	—	-580	3,049
1982	22,715	21,995	—	174	546	17,992	17,376	590	26	-$5,081	-358	2,691
Estimated future experience:[7]												
Alternative II-A:												
1983	20,874	18,146	—	1,121	1,607	17,852	17,144	681	28	—	3,022	5,712
1984	17,172	15,894	$273	—	1,004	17,964	17,180	705	79	—	-792	4,920
1985	18,302	17,050	308	—	944	18,486	17,635	737	114	—	-184	4,736
1986	19,580	18,295	350	—	934	19,239	18,362	776	101	—	341	5,077
1987	20,983	19,613	401	—	969	20,025	19,102	821	102	—	958	6,035
Alternative II-B:												
1983	20,861	18,131	—	1,121	1,609	17,852	17,144	681	28	—	3,009	5,699
1984	17,072	15,797	273	—	1,002	17,972	17,187	705	79	—	-900	4,800
1985	18,277	17,037	311	—	929	18,649	17,794	741	114	—	-372	4,427
1986	19,600	18,341	358	—	901	19,616	18,729	784	103	—	-16	4,411
1987	21,023	19,705	413	—	905	20,590	19,649	834	107	—	433	4,845

See following page for footnotes.

[1] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $402 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[2] Includes reimbursements (1) in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1971-82, for costs of noncontributory wage credits for military service performed after 1956. The amount shown for 1977 also includes $3,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[3] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $690 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[4] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $80 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5] Negative figure represents amounts loaned by the DI Trust Fund to the OASI Trust Fund. It is assumed that repayment of these loans would not occur until 1989.

[6] Less than $500,000 was transferred from the Railroad Retirement Account to the DI Trust Fund.

[7] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

TABLE 23.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED FISCAL YEARS 1960-82 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Fiscal year[1]	Total	Net contributions[2]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement Account	Interfund borrowing transfers[6]	Net increase in funds	Funds at end of period
Past experience:												
1960	$11,304	$10,830	—	—	$564	$11,606	$10,798	$234	$574	—	-$212	$22,996
1965	17,881	17,032	—	—	848	17,456	16,618	379	459	—	224	22,187
1970	36,127	34,096	—	$456	1,572	30,275	29,063	623	589	—	5,851	37,720
1975	66,677	63,374	—	499	2,804	64,658	62,547	1,101	1,010	—	2,018	48,138
1976	70,682	67,352	—	515	2,815	73,901	71,462	1,200	1,239	—	-3,219	44,919
July-Sept. 1976	18,359	18,265	—	—	94	19,764	19,460	304	—	—	-1,405	43,514
1977	81,170	77,794	—	717	2,659	85,068	82,490	1,370	1,208	—	-3,898	39,615
1978	89,595	86,451	—	741	2,403	93,861	90,829	1,413	1,618	—	-4,265	35,350
1979	102,090	99,108	—	757	2,225	104,072	101,116	1,479	1,477	—	-1,983	33,367
1980	117,427	114,413	—	675	2,339	118,548	115,624	1,494	1,430	—	-1,121	32,246
1981	134,565	131,606	—	670	2,289	139,584	136,267	1,703	1,614	—	-5,019	27,226
1982	148,027	145,113	—	843	2,072	155,963	152,097	2,046	1,820	—	-7,936	19,290
Estimated future experience[7]:												
Alternative II-A:												
1983	171,120	155,655	—	7,391	8,074	169,226	164,674	2,272	2,279	$12,437	14,332	33,622
1984	175,733	172,454	$1,967	125	1,187	177,561	172,670	2,422	2,469	-600	-2,428	31,194
1985	195,599	191,292	2,988	102	1,217	189,157	184,061	2,579	2,517	—	6,442	37,636
1986	210,778	205,447	3,546	82	1,703	202,318	197,128	2,690	2,500	-4,800	3,660	41,296
1987	226,339	219,660	4,181	68	2,431	215,093	209,695	2,842	2,556	-6,800	4,446	45,742
Alternative II-B:												
1983	171,121	155,657	—	7,391	8,073	169,226	164,674	2,272	2,279	12,437	14,332	33,623
1984	174,722	171,443	1,967	125	1,188	177,569	172,680	2,422	2,467	-500	-3,347	30,276
1985	195,078	190,849	3,008	103	1,118	190,391	185,277	2,586	2,529	—	4,686	34,963
1986	211,113	205,979	3,611	82	1,441	205,919	200,664	2,709	2,546	-1,100	4,093	39,056
1987	226,762	220,592	4,303	69	1,798	221,325	215,807	2,875	2,643	-2,400	3,038	42,094

See following page for footnotes.

[1] Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. The act further provides that the calendar quarter July-September 1976 is a period of transition from fiscal year 1976, which ended on June 30, 1976, to fiscal year 1977, which began on October 1, 1976.

[2] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,790 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[3] Includes reimbursements, (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of noncontributory wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain noninsured persons who attained age 72 before 1968. The amount shown for 1978 also includes $2,727,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[4] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amount shown for 1983 includes $7,633 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[5] Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $800 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6] Positive figure represents amounts borrowed by the OASI Trust Fund from the HI Trust Fund. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[7] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

TABLE 24.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED CALENDAR YEARS 1960-82 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1983-87 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Calendar year	Total	Net contributions[1]	Income from taxation of benefits	Reimbursements from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement Account	Interfund borrowing transfers[5]	Net increase in funds	Funds at end of period
Past experience:												
1960	$12,445	$11,876	—	—	$569	$11,796	$11,245	$240	$314	—	$647	$22,613
1965	17,857	17,205	—	—	651	19,187	18,311	418	459	—	-1,331	19,841
1970	36,993	34,737	—	$465	1,791	33,108	31,884	635	589	—	3,886	38,068
1975	67,640	64,259	—	515	2,866	69,184	67,022	1,152	1,010	—	-1,544	44,342
1976	75,034	71,595	—	717	2,722	78,242	75,759	1,244	1,239	—	-3,209	41,133
1977	81,962	78,710	—	741	2,531	87,254	84,667	1,379	1,208	—	-5,272	35,861
1978	91,903	88,883	—	757	2,264	96,018	92,960	1,440	1,618	—	-4,115	31,746
1979	105,864	103,034	—	675	2,155	107,320	104,359	1,483	1,477	—	-1,456	30,291
1980	119,712	116,711	—	670	2,330	123,550	120,598	1,522	1,430	—	-3,838	26,453
1981	142,438	139,364	—	843	2,231	144,352	140,995	1,743	1,614	—	-1,914	24,539
1982	147,913	145,667	—	854	1,391	160,111	156,182	2,109	1,820	$12,437	239	24,778
Estimated future experience[6]:												
Alternative II-A:												
1983	172,349	157,035	—	6,662	8,653	169,500	164,903	2,318	2,279	—	2,850	27,628
1984	182,062	178,213	$2,630	102	1,116	180,285	175,358	2,458	2,469	-600	1,177	28,805
1985	198,940	194,352	3,109	82	1,397	192,182	187,061	2,604	2,517	—	6,757	35,562
1986	214,342	208,543	3,692	68	2,040	205,617	200,393	2,725	2,500	-4,800	3,925	39,487
1987	230,867	223,574	4,346	56	2,891	218,297	212,862	2,879	2,556	-6,800	5,770	45,257
Alternative II-B:												
1983	172,227	156,900	—	6,662	8,666	169,501	164,904	2,318	2,279	—	2,726	27,504
1984	180,936	177,128	2,630	103	1,075	180,298	175,372	2,459	2,467	-500	138	27,642
1985	198,698	194,216	3,136	82	1,264	193,823	188,680	2,614	2,529	—	4,875	32,517
1986	214,537	209,088	3,768	69	1,612	209,855	204,562	2,747	2,546	-1,100	3,582	36,099
1987	231,167	224,632	4,484	58	2,012	225,181	219,622	2,916	2,643	-2,400	3,606	39,705

See following page for footnotes.

[1] Beginning in 1983, includes government contributions on wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,790 million representing (1) retroactive contributions on wage credits for military service in 1957-82 less (2) all reimbursements received prior to 1983 for the costs of such credits.

[2] Includes reimbursements, (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of noncontributory wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain noninsured persons who attained age 72 before 1968. The amount shown for 1977 also includes $2,727,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at places within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

[3] Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in 1983, these figures reflect payments by a borrowing trust fund to a lending trust fund for interest on amounts transferred under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amount shown for 1983 includes $7,633 million in interest on (1) retroactive government contributions on wage credits for military service in 1957-82 and (2) unnegotiated benefit checks issued before 1983.

[4] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $800 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5] Positive figure represents amounts borrowed by the OASI Trust Fund from the HI Trust Fund. Negative figures represent amounts repaid by the OASI Trust Fund to the HI Trust Fund.

[6] In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in tables 10 and 11.

D. ACTUARIAL ANALYSIS OF BENEFIT DISBURSEMENTS FROM THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES

(Required by section 201(c) of the Social Security Act)

Effective January 1957, monthly benefits have been payable from the OASI Trust Fund to disabled children aged 18 and over of retired and deceased workers in those cases in which the disability began before age 22. Effective February 1968, reduced monthly benefits have been payable from this trust fund to disabled widows and widowers at ages 50 and above.

On December 31, 1982, about 533,000 persons were receiving monthly benefits from the OASI Trust Fund because of their disability or the disability of a child. This total includes 42,000 mothers and fathers (wives or husbands under age 65 of retired-worker beneficiaries and widows or widowers of deceased insured workers) who met all other qualifying requirements and were receiving unreduced benefits solely because they had a disabled-child beneficiary in their care. Also included, beginning in 1981, are mothers and fathers, as described above, who are eligible to receive benefits solely because they have a disabled child age 16 or 17 in their care. Benefits paid from this trust fund to the persons described above totaled $1,566 million in calendar year 1982. Similar figures are presented in table 25 to show the experience in selected calendar years during 1960-82. Figures relating to past experience for years not shown are contained in prior annual reports.

TABLE 25.—BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-87

[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments[1]		
	Total	Children[2]	Widows and widowers	Total	Children[2]	Widows and widowers[3]
Past experience:						
1960	117	117	—	$59	$59	—
1965	214	214	—	134	134	—
1970	316	281	36	301	260	$41
1975	435	376	59	664	560	104
1976	457	395	62	748	637	111
1977	480	414	65	868	748	120
1978	494	430	64	950	823	127
1979	507	445	62	1,071	946	125
1980	519	460	59	1,223	1,097	126
1981	527	473	54	1,421	1,296	125
1982	533	484	49	1,566	1,451	115
Estimated future experience:[4]						
Alternative II-A:						
1983	545	500	45	1,749	1,643	106
1984	555	511	44	1,912	1,765	147
1985	565	523	42	2,058	1,911	147
1986	574	533	41	2,207	2,059	148
1987	585	545	40	2,350	2,199	151
Alternative II-B:						
1983	545	500	45	1,749	1,643	106
1984	555	511	44	1,921	1,773	148
1985	565	523	42	2,089	1,940	149
1986	574	533	41	2,267	2,114	153
1987	585	545	40	2,439	2,282	157

[1] Beginning in 1966, includes payments for vocational rehabilitation services.

[2] Reflects the effect of including certain mothers and fathers. (See text.)

[3] In 1983 and prior years, reflects the offsetting effect of lower benefits payable to disabled widows and widowers who continue to receive benefits after attaining age 60 (62, for disabled widowers, prior to 1973) as compared to the higher nondisabled widow's (and widower's) benefits that would otherwise be payable.

[4] The estimates are based on alternatives II-A and II-B and reflect the assumed changes under the automatic increase provisions, as described in an earlier section.

Table 25 also shows the estimated future experience in calendar years 1983-87, under the alternative II-A and II-B assumptions described in an earlier section. Total benefit payments from the OASI Trust Fund with respect to disabled beneficiaries are estimated to increase from $1,749 million in calendar year 1983 to $2,350 million in calendar year 1987 under the alternative II-A assumptions, and to $2,439 million in calendar year 1987 under the alternative II-B assumptions.

In calendar year 1982, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including payments from the latter fund to all children and spouses of disabled-worker beneficiaries) totaled $18,904 million, of which $1,566 million, or 8.3 percent, represented payments from the OASI Trust Fund. Similar figures for selected calendar years during 1960-82 and estimates for calendar years 1983-87, under alternatives II-A and II-B, are presented in table 26. Figures relating to past experience for years not shown in table 26 are contained in prior annual reports.

TABLE 26.—BENEFIT PAYMENTS UNDER THE OASDI PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, SELECTED CALENDAR YEARS 1960-87

[Amounts in millions]

Calendar year	Benefit payments[1] from —			
			OASI Trust Fund	
	Total[1]	DI Trust Fund[2]	Amount[3]	As a percentage of total benefit payments with respect to disabled beneficiaries
Past experience:				
1960	$627	$568	$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1975	9,169	8,505	664	7.2
1976	10,803	10,055	748	6.9
1977	12,415	11,547	868	7.0
1978	13,549	12,599	950	7.0
1979	14,857	13,786	1,071	7.2
1980	16,738	15,515	1,223	7.3
1981	18,621	17,200	1,421	7.6
1982	18,904	17,338	1,566	8.3
Estimated future experience:[4]				
Alternative II-A:				
1983	18,835	17,086	1,749	9.3
1984	19,095	17,183	1,912	10.0
1985	19,692	17,634	2,058	10.5
1986	20,567	18,360	2,207	10.7
1987	21,449	19,099	2,350	11.0
Alternative II-B:				
1983	18,835	17,086	1,749	9.3
1984	19,112	17,191	1,921	10.1
1985	19,882	17,793	2,089	10.5
1986	20,994	18,727	2,267	10.8
1987	22,086	19,647	2,439	11.0

[1] Beginning in 1966, includes payments for vocational rehabilitation services.

[2] Benefit payments to disabled workers and their children and spouses.

[3] Benefit payments to disabled children aged 18 and over, to certain mothers and fathers (see text), and to disabled widows and widowers (see footnote 3, table 25).

[4] The estimates are based on the alternative II-A and II-B assumptions and reflect the resulting assumed changes under the automatic increase provisions, as described in an earlier section.

E. ACTUARIAL STATUS OF THE TRUST FUNDS

Historically, the actuarial status of the OASDI program has been measured by the actuarial balance, as described earlier in this section. Recent annual reports have shown both medium-range and long-range actuarial balances, which have been computed, respectively, over the 25-year and 75-year periods beginning with the calendar year of issuance of the report. Accordingly, the medium-range and long-range actuarial balances shown in this report pertain to the periods 1983-2007 and 1983-2057, respectively. Also presented are actuarial balances for the second and third 25-year periods within the 75-year period.

As described earlier in this section, a single measure of the actuarial balance over a long period may not reveal problems which could occur during that period. Therefore, in addition to the medium-range and long-range actuarial balances, two other indicators of the financial condition of the trust funds are shown in this report. One is the series of annual balances (that is, the year-by-year differences between the projected total income rates and cost rates), and the other is the series of projected trust fund ratios (assets at the beginning of the year expressed as a percentage of outgo during the year). The significance of these indicators was discussed earlier.

The cost estimates are sensitive to changes in the underlying economic and demographic assumptions. The degree of sensitivity, however, varies considerably among the various assumptions. For example, variations in projected fertility rates have little effect on the medium-range cost estimates, because almost all of the projected covered workers and beneficiaries were born prior to the start of the projection period. However, variations in economic factors such as wage and price increases have significant effects on the estimates, even in the medium-range period. In general, the degree of confidence that can be placed in the assumptions and estimates is greater for the medium-range period than for the long-range period. Nonetheless, even for the medium-range period, the cost projections are only an indication of the trend and general range of future program costs. Appendix B contains a more detailed discussion of the effects on the cost estimates of varying two major economic assumptions.

Table 27 presents a comparison, on the basis of alternatives II-A and II-B, of the estimated cost rates and total income rates of the OASDI program. Under alternative II-A, the program is projected to have annual surpluses beginning in 1984 and continuing until about 2025, after which the program is projected to have annual deficits. These deficits are projected to grow steadily to a peak of 1.00 percent of taxable payroll in 2035 and then fluctuate between 0.9 and 1.2 percent during the remainder of the long-range projection period. This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 2.38 percent of taxable payroll and a long-range actuarial surplus of 0.84 percent.

Under alternative II-B, annual surpluses are also projected, beginning in 1984 and continuing until about 2020, after which deficits are projected for each year. These deficits grow more rapidly than those under alternative II-A, and temporarily peak around 2035 at 2.04 percent of taxable payroll. Although the annual deficits in the remainder of the long-range period are significantly higher than those under alternative II-A, they follow a similar pattern, fluctuating between 2.0 and 2.3 percent of taxable payroll. This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 1.83 percent of taxable payroll and a long-range surplus of 0.02 percent.

TABLE 27.—COMPARISON OF ESTIMATED COST RATES AND INCOME RATES OF THE OASDI PROGRAM UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2060

[As a percentage of taxable payroll]

Calendar year	Cost rate			Income rate			Balance
	OASI	DI	Total	Payroll tax	Taxation of benefits	Total	
Alternative II-A:							
1983	10.28	1.21	11.49	10.80	[1]0.44	11.24	-0.24
1984	10.24	1.13	11.37	11.40	.17	11.57	.19
1985	10.15	1.08	11.24	11.40	.18	11.58	.35
1986	10.16	1.05	11.20	11.40	.20	11.60	.40
1987	10.06	1.02	11.09	11.40	.22	11.62	.53
1988	9.98	.99	10.98	12.12	.24	12.36	1.38
1989	9.84	.97	10.81	12.12	.26	12.38	1.57
1990	9.74	.97	10.70	12.40	.29	12.69	1.99
1991	9.64	.96	10.60	12.40	.32	12.72	2.12
1992	9.55	.96	10.51	12.40	.35	12.75	2.24
1993	9.34	.95	10.29	12.40	.36	12.76	2.47
1994	9.18	.94	10.12	12.40	.36	12.76	2.64
1995	9.03	.93	9.96	12.40	.37	12.77	2.81
1996	8.87	.92	9.80	12.40	.36	12.76	2.97
1997	8.73	.92	9.64	12.40	.36	12.76	3.12
1998	8.60	.93	9.53	12.40	.36	12.76	3.23
1999	8.47	.95	9.42	12.40	.36	12.76	3.33
2000	8.35	.97	9.32	12.40	.36	12.76	3.43
2001	8.25	1.00	9.25	12.40	.35	12.75	3.50
2002	8.17	1.02	9.20	12.40	.36	12.76	3.56
2003	8.11	1.06	9.16	12.40	.36	12.76	3.59
2004	8.06	1.09	9.15	12.40	.36	12.76	3.61
2005	8.02	1.13	9.15	12.40	.36	12.76	3.61
2006	8.02	1.16	9.18	12.40	.36	12.76	3.58
2007	8.04	1.20	9.24	12.40	.37	12.77	3.53
2010	8.26	1.31	9.57	12.40	.39	12.79	3.22
2015	9.22	1.43	10.64	12.40	.45	12.85	2.21
2020	10.43	1.48	11.91	12.40	.52	12.92	1.01
2025	11.53	1.49	13.02	12.40	.58	12.98	-.03
2030	12.26	1.45	13.71	12.40	.63	13.03	-.67
2035	12.60	1.46	14.07	12.40	.67	13.07	-1.00
2040	12.55	1.50	14.05	12.40	.68	13.08	-.96
2045	12.50	1.54	14.03	12.40	.70	13.10	-.93
2050	12.59	1.54	14.13	12.40	.71	13.11	-1.02
2055	12.72	1.53	14.25	12.40	.71	13.11	-1.14
2060	12.78	1.52	14.30	12.40	.72	13.12	-1.18
25-year averages:							
1983-2007	9.08	1.02	10.10	12.15	.32	12.48	2.38
2008-2032	10.34	1.43	11.77	12.40	.51	12.91	1.15
2033-2057	12.59	1.51	14.10	12.40	.69	13.09	-1.01
75-year average:							
1983-2057	10.67	1.32	11.99	12.32	.51	12.83	.84

TABLE 27.—COMPARISON OF ESTIMATED COST RATES AND INCOME RATES OF THE OASDI PROGRAM UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2060 (Cont.)

[As a percentage of taxable payroll]

Calendar year	Cost rate			Income rate			
	OASI	DI	Total	Payroll tax	Taxation of benefits	Total	Balance
Alternative II-B:							
1983	10.28	1.21	11.49	10.80	[1]0.44	11.24	-0.24
1984	10.30	1.14	11.44	11.40	.17	11.57	.12
1985	10.24	1.09	11.33	11.40	.18	11.58	.25
1986	10.34	1.07	11.40	11.40	.20	11.60	.20
1987	10.35	1.04	11.39	11.40	.23	11.63	.24
1988	10.35	1.02	11.37	12.12	.25	12.37	1.00
1989	10.29	1.01	11.30	12.12	.28	12.40	1.09
1990	10.26	1.01	11.27	12.40	.31	12.71	1.44
1991	10.18	1.00	11.19	12.40	.34	12.74	1.55
1992	10.10	1.00	11.10	12.40	.37	12.77	1.67
1993	9.94	.99	10.93	12.40	.38	12.78	1.85
1994	9.81	.98	10.79	12.40	.39	12.79	2.00
1995	9.68	.97	10.65	12.40	.39	12.79	2.14
1996	9.54	.97	10.51	12.40	.39	12.79	2.28
1997	9.40	.96	10.36	12.40	.39	12.79	2.42
1998	9.29	.98	10.27	12.40	.39	12.79	2.52
1999	9.17	1.00	10.17	12.40	.38	12.78	2.62
2000	9.06	1.02	10.08	12.40	.38	12.78	2.71
2001	8.96	1.05	10.01	12.40	.38	12.78	2.78
2002	8.88	1.07	9.95	12.40	.38	12.78	2.83
2003	8.81	1.11	9.92	12.40	.39	12.79	2.87
2004	8.75	1.14	9.90	12.40	.39	12.79	2.89
2005	8.72	1.18	9.90	12.40	.39	12.79	2.89
2006	8.71	1.22	9.93	12.40	.39	12.79	2.87
2007	8.73	1.26	9.98	12.40	.40	12.80	2.81
2010	8.95	1.37	10.31	12.40	.42	12.82	2.51
2015	9.93	1.49	11.43	12.40	.48	12.88	1.45
2020	11.21	1.55	12.76	12.40	.55	12.95	.19
2025	12.40	1.56	13.96	12.40	.63	13.03	-.93
2030	13.22	1.51	14.73	12.40	.68	13.08	-1.65
2035	13.62	1.53	15.16	12.40	.72	13.12	-2.04
2040	13.60	1.57	15.17	12.40	.74	13.14	-2.03
2045	13.56	1.61	15.17	12.40	.76	13.16	-2.01
2050	13.66	1.61	15.27	12.40	.76	13.16	-2.11
2055	13.79	1.60	15.40	12.40	.77	13.17	-2.23
2060	13.85	1.59	15.44	12.40	.77	13.17	-2.27
25-year averages:							
1983-2007	9.61	1.06	10.66	12.15	.34	12.50	1.83
2008-2032	11.14	1.49	12.64	12.40	.55	12.95	.32
2033-2057	13.65	1.58	15.23	12.40	.75	13.15	-2.08
75-year average:							
1983-2057	11.46	1.38	12.84	12.32	.55	12.87	.02

[1] This figure represents the amount, expressed as a percentage of taxable payroll, transferred in 1983 from the general fund of the Treasury to the OASI and DI Trust Funds on account of military service wage credits attributable to service before 1957.

Note: The definitions of alternatives II-A and II-B, the income rates, cost rate, balance, and taxable payroll are presented in the text.

The estimated average long-range income rates under alternatives II-A and II-B are about 107 and 100.2 percent, respectively, of the estimated average long-range cost rates (of 11.99 and 12.84 percent of taxable payroll). Because the estimated average income rate under alternative II-B is between 95 and 105 percent of the estimated average cost rate, the program is in close actuarial balance. Under alternative II-A, the estimated average income rate exceeds 105 percent of the estimated average cost rate.

The estimated cost rates increase rapidly after the medium-range period primarily because the number of beneficiaries is projected to increase at a faster rate than the number of covered workers. This occurs because the relatively large number of persons born during the period of high fertility rates from the end of World War II through the early 1960's will reach retirement age, and begin to receive benefits, while the relatively small number of persons born during the subsequent periods of low fertility rates will comprise the labor force. During the last years of the projection period, the cost rates generally stabilize at a fairly high level, which reflects the stabilization in the projected ratio of the number of beneficiaries to the number of covered workers. Such stabilization results from the relatively smooth pattern of the assumed fertility rates. A comparison of the numbers of beneficiaries and covered workers, both historically and as projected under all four alternatives, is shown in table 28.

TABLE 28.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1945-2060

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,200	7,563	—	7,563	8.6	12
1960	72,530	13,740	522	14,262	5.1	20
1965	80,680	18,509	1,648	20,157	4.0	25
1970	93,090	22,618	2,568	25,186	3.7	27
1975	100,200	26,998	4,125	31,123	3.2	31
1980	[3]114,300	30,385	4,734	35,119	[3]3.3	[3]31
1981	[3]115,800	31,074	4,636	35,710	[3]3.2	[3]31
1982	[3]115,000	31,207	4,184	35,391	[3]3.2	[3]31
Alternative I:						
1983	115,539	31,856	3,928	35,784	3.2	31
1985	125,507	33,142	3,754	36,896	3.4	29
1990	137,696	36,230	3,743	39,973	3.4	29
1995	146,036	38,072	3,705	41,777	3.5	29
2000	154,315	38,908	4,149	43,057	3.6	28
2005	160,921	40,048	5,371	45,419	3.5	28
2010	165,218	42,894	5,725	48,619	3.4	29
2015	167,644	48,249	6,148	54,397	3.1	32
2020	169,618	54,424	6,370	60,794	2.8	36
2025	172,610	60,163	6,595	66,758	2.6	39
2030	176,631	64,127	6,551	70,678	2.5	40
2035	181,355	66,101	6,473	72,574	2.5	40
2040	186,302	65,996	6,656	72,652	2.6	39
2045	191,560	65,985	6,939	72,924	2.6	38
2050	197,336	66,886	7,100	73,986	2.7	37
2055	203,619	68,383	7,291	75,674	2.7	37
2060	210,141	69,970	7,437	77,407	2.7	37
Alternative II-A:						
1983	115,432	31,882	3,929	35,811	3.2	31
1985	124,555	33,222	3,773	36,995	3.4	30
1990	136,513	36,572	3,883	40,455	3.4	30
1995	143,175	38,930	4,008	42,938	3.3	30
2000	150,835	40,153	4,559	44,712	3.4	30
2005	156,696	41,636	5,884	47,520	3.3	30
2010	159,744	44,803	6,305	51,108	3.1	32
2015	160,464	50,527	6,743	57,270	2.8	36
2020	160,290	57,154	6,960	64,114	2.5	40
2025	160,457	63,471	7,132	70,603	2.3	44
2030	161,109	68,101	7,020	75,121	2.1	47
2035	162,035	70,763	6,879	77,642	2.1	48
2040	162,827	71,211	6,996	78,207	2.1	48
2045	163,588	71,608	7,173	78,781	2.1	48
2050	164,505	72,588	7,172	79,760	2.1	48
2055	165,679	73,653	7,191	80,844	2.0	49
2060	166,967	74,402	7,173	81,575	2.0	49
Alternative II-B:						
1983	115,220	31,882	3,929	35,811	3.2	31
1985	123,865	33,222	3,773	36,995	3.3	30
1990	134,485	36,571	3,881	40,452	3.3	30
1995	141,306	38,927	4,006	42,933	3.3	30
2000	147,917	40,144	4,555	44,699	3.3	30
2005	153,326	41,620	5,878	47,498	3.2	31
2010	156,199	44,770	6,297	51,067	3.1	33
2015	156,831	50,483	6,741	57,224	2.7	36
2020	156,612	57,093	6,947	64,040	2.4	41
2025	156,727	63,395	7,117	70,512	2.2	45
2030	157,341	68,024	7,003	75,027	2.1	48
2035	158,234	70,671	6,862	77,533	2.0	49
2040	159,006	71,130	6,980	78,110	2.0	49
2045	159,717	71,527	7,156	78,683	2.0	49
2050	160,588	72,508	7,153	79,661	2.0	50

TABLE 28.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1945-2060 (Cont.)

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
Alternative II-B: (Cont.)						
2055	161,715	73,560	7,174	80,734	2.0	50
2060	162,960	74,308	7,155	81,463	2.0	51
Alternative III:						
1983	114,572	31,902	3,931	35,833	3.2	31
1985	121,246	33,290	3,786	37,076	3.3	31
1990	132,156	36,888	4,002	40,890	3.2	31
1995	138,070	39,722	4,284	44,006	3.1	32
2000	144,472	41,362	4,917	46,279	3.1	32
2005	149,250	43,288	6,307	49,595	3.0	33
2010	150,780	46,972	6,757	53,729	2.8	36
2015	149,298	53,372	7,195	60,567	2.5	41
2020	146,368	60,856	7,358	68,214	2.1	47
2025	143,071	68,254	7,455	75,709	1.9	53
2030	139,717	74,205	7,258	81,463	1.7	58
2035	136,256	78,287	7,027	85,314	1.6	63
2040	132,420	80,120	7,029	87,149	1.5	66
2045	128,340	81,721	7,026	88,747	1.4	69
2050	124,299	83,419	6,779	90,198	1.4	73
2055	120,549	84,379	6,558	90,937	1.3	75
2060	117,067	84,334	6,313	90,647	1.3	77

[1] Workers who pay Social Security taxes at some time during the year.

[2] Beneficiaries with monthly benefits in current-payment status as of June 30.

[3] Preliminary.

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text. The numbers of beneficiaries do not include certain noninsured persons, most of whom attained age 72 before 1968 and have less than 3 quarters of coverage, and for whom the costs are reimbursed by the general fund of the Treasury. The number of such noninsured persons was 68,923 as of June 30, 1982, and is estimated to be less than 500 by the turn of the century.

Table 28 shows that, even under alternative I, which includes high fertility rates and little mortality improvement, the number of covered workers per beneficiary declines from the current level of 3.2 to an ultimate level of about 2.7. Under alternative III, which includes low fertility rates and substantial mortality improvement, the decline is far more dramatic, reaching 1.3 workers per beneficiary. Under alternatives II-A and II-B, the ratio declines to 2.0 workers per beneficiary. The impact of these changes on OASDI financing can be readily assessed by looking at the projected number of beneficiaries per hundred workers. Under alternatives I, II-A, II-B, and III, this rises by the end of the long-range period to levels of 37, 49, 50, and about 76, respectively. These levels are, respectively, 19, 58, 61, and about 145 percent higher than the current level of 31 beneficiaries per 100 covered workers.

The implication of this demographic shift is a significantly higher cost rate during the last third of the long-range period than during the first two-thirds. Under all but the most optimistic of the four alternative sets of assumptions used in this report, the OASDI program is estimated to have substantial annual deficits during the last 25 years, although these deficits are not so large that they exceed the accumulated surpluses of earlier years (as discussed later). Eventually, however, either the costs would need to be reduced or the income would need to be raised in order to maintain actuarial balance.

Table 29 shows the OASDI cost rates on the basis of the four alternatives. Under alternatives I and II-A, the cost rates generally decline slowly for the next 20 years. Under alternative II-B, the cost rates follow a similar pattern, except that the steady decline begins after

1986. Under alternative III, the cost rates fluctuate for about a decade before following a similar downward pattern. During the last few years of the medium-range period, the cost rates begin to rise slightly under all four alternatives.

After the medium-range period, under each alternative, the cost rates increase rapidly (because of the demographic shift discussed earlier). Under alternative I, the cost rates peak around 2030 after which they decrease slightly to the end of the projection period. Under alternatives II-A and II-B, they are fairly constant in 2035-45 before increasing thereafter through the end of the projection period. Under alternative III, the cost rates continuously increase through the end of the long-range projection period.

The OASDI cost rates under alternatives I and III differ by about 15 percentage points at the end of the long-range period, although by only 3.46 percentage points at the end of the medium-range period. The average long-range cost rate for the OASDI program varies from 9.81 percent under alternative I to 16.56 percent unde.: alternative III, while the average medium-range cost rate varies much less—from 9.22 to 11.44 percent.

TABLE 29.—ESTIMATED COST RATES OF THE OASDI PROGRAM BY ALTERNATIVE, CALENDAR YEARS 1983-2060

[As a percentage of taxable payroll]

Calendar year	Cost rate by alternative			
	I	II-A	II-B	III
1983	11.46	11.49	11.49	11.62
1984	11.28	11.37	11.44	11.75
1985	11.01	11.24	11.33	11.43
1986	10.87	11.20	11.40	11.18
1987	10.68	11.09	11.39	11.30
1988	10.50	10.98	11.37	11.34
1989	10.15	10.81	11.30	11.34
1990	10.15	10.70	11.27	11.38
1991	9.82	10.60	11.19	11.93
1992	9.72	10.51	11.10	11.90
1993	9.25	10.29	10.93	11.79
1994	9.03	10.12	10.79	11.72
1995	8.84	9.96	10.65	11.65
1996	8.66	9.80	10.51	11.54
1997	8.49	9.64	10.36	11.45
1998	8.37	9.53	10.27	11.38
1999	8.25	9.42	10.17	11.31
2000	8.14	9.32	10.08	11.25
2001	8.06	9.25	10.01	11.21
2002	7.99	9.20	9.95	11.20
2003	7.95	9.16	9.92	11.19
2004	7.92	9.15	9.90	11.21
2005	7.91	9.15	9.90	11.25
2006	7.93	9.18	9.93	11.32
2007	7.97	9.24	9.98	11.43
2010	8.22	9.57	10.31	11.93
2015	9.07	10.64	11.43	13.48
2020	10.02	11.91	12.76	15.43
2025	10.73	13.02	13.96	17.44
2030	11.00	13.71	14.73	19.17
2035	10.94	14.07	15.16	20.65
2040	10.60	14.05	15.17	21.71
2045	10.30	14.03	15.17	22.74
2050	10.16	14.13	15.27	23.82
2055	10.10	14.25	15.40	24.78
2060	10.03	14.30	15.44	25.46

TABLE 29.—ESTIMATED COST RATES OF THE OASDI PROGRAM BY ALTERNATIVE, CALENDAR YEARS 1983-2060 (Cont.)
[As a percentage of taxable payroll]

Calendar year	Cost rate by alternative			
	I	II-A	II-B	III
25-year averages:				
1983-2007	9.22	10.10	10.66	11.44
2008-2032	9.80	11.77	12.64	15.50
2033-2057	10.42	14.10	15.23	22.73
75-year average:				
1983-2057	9.81	11.99	12.84	16.56

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate and taxable payroll are presented in the text.

Future OASDI costs may not necessarily fall within the range defined by the results under alternatives I and III. Nonetheless, because alternatives I and III define a reasonably wide range of economic and demographic conditions, the resulting cost estimates delineate a reasonable range of possibilities for future program costs.

Table 30 shows a comparison of the OASDI cost as a percentage of Gross National Product (GNP) on the basis of the four alternatives. There are various similarities between the patterns of these cost percentages and the cost rates shown in the previous table. Under all four alternatives, the percentages generally decline slowly to 2005, after which they begin to rise. Shortly after the medium-range period, under each alternative, the percentages increase rapidly (because of the demographic shift discussed earlier) and peak around 2030 under alternative I and 2035 under alternatives II-A and II-B, while continuing to increase through the end of the long-range projection period under alternative III.

Another similarity is that the costs as percentages of GNP projected under the four alternatives differ by a relatively large amount at the end of the long-range period (about 4.3 percentage points), although differing by a much smaller amount at the end of the medium-range period (1.21 percentage points). In addition, the average long-range cost as a percentage of GNP projected under the various alternatives varies by a relatively large amount (from 4.27 percent under alternative I to 6.38 percent under alternative III), while the average medium-range cost varies by a much smaller amount (from 4.07 to 4.90 percent).

TABLE 30.—ESTIMATED COST OF THE OASDI PROGRAM AS A PERCENTAGE OF GNP BY ALTERNATIVE, CALENDAR YEARS 1983-2060

Calendar year	I	II-A	II-B	III
1983	5.18	5.19	5.19	5.28
1984	5.00	5.05	5.08	5.21
1985	4.86	4.95	5.00	5.00
1986	4.80	4.92	5.01	4.84
1987	4.72	4.87	5.00	4.90
1988	4.63	4.81	4.99	4.92
1989	4.44	4.74	4.96	4.92
1990	4.47	4.68	4.92	4.92
1991	4.30	4.64	4.88	5.15
1992	4.29	4.60	4.84	5.13
1993	4.08	4.49	4.75	5.07
1994	3.99	4.42	4.69	5.03
1995	3.90	4.34	4.62	4.99
1996	3.82	4.27	4.55	4.93
1997	3.75	4.20	4.48	4.87
1998	3.70	4.15	4.43	4.83
1999	3.64	4.10	4.38	4.79
2000	3.60	4.05	4.33	4.75
2001	3.56	4.02	4.29	4.72
2002	3.53	3.99	4.26	4.70
2003	3.51	3.97	4.24	4.69

TABLE 30.—ESTIMATED COST OF THE OASDI PROGRAM AS A PERCENTAGE OF GNP BY ALTERNATIVE, CALENDAR YEARS 1983-2060 (Cont.)

Calendar year	I	II-A	II-B	III
2004	3.50	3.96	4.22	4.68
2005	3.49	3.95	4.21	4.68
2006	3.50	3.96	4.22	4.70
2007	3.52	3.98	4.23	4.73
2010	3.62	4.11	4.34	4.89
2015	3.98	4.53	4.74	5.42
2020	4.38	5.02	5.22	6.09
2025	4.66	5.43	5.63	6.75
2030	4.76	5.67	5.86	7.29
2035	4.71	5.76	5.94	7.70
2040	4.54	5.70	5.87	7.94
2045	4.40	5.64	5.78	8.17
2050	4.31	5.63	5.74	8.39
2055	4.27	5.62	5.71	8.57
2060	4.22	5.59	5.64	8.64
25-year averages:				
1983-2007	4.07	4.41	4.63	4.90
2008-2032	4.28	4.95	5.16	6.09
2033-2057	4.45	5.67	5.81	8.15
75-year average:				
1983-2057	4.27	5.01	5.20	6.38

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

Table 31 shows a comparison of the estimated average cost rates and the estimated average total income rates, by trust fund. In the medium range, actuarial surpluses are projected for both the OASI and DI programs under all four alternatives; the combined OASDI medium-range actuarial surplus ranges from 1.08 percent of taxable payroll under alternative III to 3.23 percent under alternative I.

In the long range, a large deficit is projected for the OASI program under alternative III, an insignificant deficit under alternative II-B, and surpluses under alternatives I and II-A. For the DI program, a deficit is projected under alternative III and surpluses under the other three alternatives. The combined OASDI long-range actuarial balance ranges from a surplus of 2.92 percent of taxable payroll under alternative I to a deficit of 3.51 percent under alternative III.

TABLE 31.—COMPARISON OF ESTIMATED AVERAGE COST RATE WITH ESTIMATED AVERAGE TOTAL INCOME RATE BY ALTERNATIVE AND TRUST FUND

[As a percentage of taxable payroll]

Calendar years	Average cost rate			Average total income rate			Balance		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
Alternative I:									
1983-2007	8.31	0.91	9.22	11.19	1.26	12.45	+2.88	+0.35	+3.23
2008-2032	8.65	1.16	9.80	11.36	1.47	12.83	+2.71	+.31	+3.03
2033-2057	9.25	1.17	10.42	11.44	1.48	12.91	+2.19	+.30	+2.49
1983-2057	8.73	1.08	9.81	11.33	1.40	12.73	+2.59	+.32	+2.92
Alternative II-A:									
1983-2007	9.08	1.02	10.10	11.21	1.26	12.48	+2.14	+.24	+2.38
2008-2032	10.34	1.43	11.77	11.43	1.48	12.91	+1.10	+.05	+1.15
2033-2057	12.59	1.51	14.10	11.60	1.49	13.09	-.99	-.02	-1.01
1983-2057	10.67	1.32	11.99	11.42	1.41	12.83	+.75	+.09	+.84
Alternative II-B:									
1983-2007	9.61	1.06	10.66	11.23	1.26	12.50	+1.63	+.20	+1.83
2008-2032	11.14	1.49	12.64	11.47	1.48	12.95	+.33	-.01	+.32
2033-2057	13.65	1.58	15.23	11.65	1.50	13.15	-1.99	-.09	-2.08
1983-2057	11.46	1.38	12.84	11.45	1.41	12.87	-.01	+.04	+.02

TABLE 31.—COMPARISON OF ESTIMATED AVERAGE COST RATE WITH ESTIMATED AVERAGE TOTAL INCOME RATE BY ALTERNATIVE AND TRUST FUND (Cont.)

[As a percentage of taxable payroll]

Calendar years	Average cost rate			Average total income rate			Balance		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
Alternative III:									
1983-2007	10.28	1.16	11.44	11.26	1.27	12.53	+.98	+.11	+1.08
2008-2032	13.68	1.81	15.50	11.58	1.50	13.08	-2.10	-.32	-2.42
2033-2057	20.68	2.05	22.73	12.00	1.52	13.52	-8.67	-.53	-9.21
1983-2057	14.88	1.68	16.56	11.61	1.43	13.04	-3.27	-.25	-3.51

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate, total income rate, balance, and taxable payroll are presented in the text. Totals do not necessarily equal the sum of rounded components.

Table 32 shows the trust fund ratios for the OASI and DI programs under all four alternatives. The OASI and DI ratios are projected to be at fairly low levels for several years before increasing to very high levels thereafter. Under alternative I, they increase throughout the long-range projection period to extremely high levels around 2,000 percent. By contrast, under alternative III, the OASI ratio, after peaking around 260 percent, decreases rapidly until the fund is exhausted in 2028. Similarly, the DI ratio, after peaking at 220 percent, decreases rapidly until the fund is exhausted in 2021.

TABLE 32.—ESTIMATED TRUST FUND RATIOS BY ALTERNATIVE AND TRUST FUND, CALENDAR YEARS 1983-2060

Calendar year	Alternative I			Alternative II-A			Alternative II-B			Alternative III		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
1983	15	15	15	15	15	15	15	15	15	15	15	15
1984	21	38	22	20	38	22	20	38	22	19	37	21
1985	22	35	23	21	33	22	20	32	21	17	29	18
1986	26	35	27	24	31	25	22	29	23	18	25	19
1987	28	40	29	25	32	25	23	28	23	21	24	21
1988	37	50	38	26	36	27	23	30	24	18	24	19
1989	53	94	57	39	48	40	28	38	29	26	30	27
1990	73	113	77	51	84	54	35	69	38	34	56	36
1991	99	152	104	69	109	72	47	89	51	42	70	45
1992	126	188	131	88	135	92	59	111	64	48	83	51
1993	162	237	169	110	165	115	75	136	80	56	97	60
1994	201	287	209	135	195	140	91	161	98	64	111	68
1995	244	340	253	161	226	168	110	186	117	73	124	78
1996	290	394	300	191	258	197	130	213	137	83	136	88
1997	340	450	350	222	291	229	152	240	160	93	149	99
1998	393	495	402	256	317	262	175	262	183	105	156	110
1999	448	535	457	291	340	296	200	280	208	118	164	123
2000	506	574	513	329	360	332	227	297	234	132	169	136
2001	564	631	571	366	397	370	253	329	261	145	187	149
2002	624	683	630	405	429	408	281	357	269	158	202	163
2003	685	725	689	445	454	446	309	379	317	172	212	177
2004	746	761	748	485	475	484	338	396	345	187	218	190
2005	807	792	805	525	491	521	367	409	372	201	220	203
2006	867	819	861	565	503	557	397	419	399	215	220	216
2007	925	842	915	603	512	591	425	425	425	229	217	227
2010	1,079	897	1,055	704	526	680	501	431	491	260	193	251
2015	1,227	983	1,195	792	532	757	563	421	544	263	127	245
2020	1,286	1,068	1,262	800	535	767	556	405	538	204	38	184
2025	1,316	1,216	1,305	766	544	741	507	390	494	99	(1)	81
2030	1,363	1,400	1,366	723	577	708	442	393	437	(1)	(1)	(1)
2035	1,448	1,542	1,458	684	595	675	372	388	374	(1)	(1)	(1)
2040	1,594	1,652	1,601	662	596	655	308	369	314	(1)	(1)	(1)
2045	1,761	1,743	1,759	642	587	636	245	339	255	(1)	(1)	(1)
2050	1,913	1,853	1,906	615	585	611	178	311	192	(1)	(1)	(1)
2055	2,050	1,965	2,040	580	585	580	106	284	125	(1)	(1)	(1)
2060	2,193	2,086	2,180	544	590	549	31	260	54	(1)	(1)	(1)

TABLE 32.—ESTIMATED TRUST FUND RATIOS BY ALTERNATIVE AND TRUST FUND, CALENDAR YEARS 1983-2060 (Cont.)

Calendar year	Alternative I			Alternative II-A			Alternative II-B			Alternative III		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
Trust fund is projected to be first exhausted in:	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	2028	2021	2027

[1] The fund is projected to be exhausted and not to recover before the end of the projection period.

[2] The fund is not projected to be exhausted within the projection period.

Note: The definitions of alternatives I, II-A, II-B, and III, and trust fund ratio are presented in the text. The OASDI ratios shown after the year a given fund is projected to be exhausted are theoretical and are shown for informational purposes only.

The actuarial balances shown in this report are substantially improved from those in last year's report. Table 33 itemizes the reasons for the differences—together with their estimated cost effects—between the estimates under alternative II-B in last year's report and those in this report.

TABLE 33.—CHANGE IN ESTIMATED MEDIUM-RANGE AND LONG-RANGE ACTUARIAL BALANCE UNDER ALTERNATIVE II-B BY TRUST FUND AND REASON FOR CHANGE

[As a percentage of taxable payroll]

Item	Medium range			Long range		
	OASI	DI	Total	OASI	DI	Total
Shown in last year's report:[1]						
Average tax rate	9.93	2.07	12.01	10.11	2.16	12.27
Average cost rate	10.14	1.23	11.37	12.59	1.50	14.09
Actuarial balance	-.21	+.85	+.64	-2.48	+.66	-1.82
Changes in actuarial balance due to changes in:[2]						
June 1982 benefit increase below estimate	+0.01	+0.00	+0.01	+0.00	+0.00	+0.00
Public Law 97-248 (TEFRA)	+.00	+.00	+.01	+.01	+.00	+.01
Valuation date	+.08	+.01	+.09	-.05	+.00	-.05
Demographic assumptions	+.07	+.02	+.09	-.15	-.01	-.16
Preliminary economic assumptions	-.20	-.02	-.22	-.09	-.01	-.10
Disability assumptions	+.00	+.11	+.11	+.00	+.20	+.20
Withdrawal assumptions	-.13	-.01	-.14	-.12	-.01	-.13
All other factors	-.04	+.01	-.03	-.04	+.00	-.04
Public Law 98-21(the 1983 amendments)	+2.03	-.77	+1.26	+2.89	-.80	+2.09
Final economic assumptions	+.02	+.01	+.02	+.02	+.01	+.02
Total change in actuarial balance	+1.83	-.64	+1.19	+2.46	-.63	+1.84
Shown in this report:[3]						
Actuarial balance	+1.63	+.20	+1.83	-.01	+.04	+.02
Average cost rate	9.61	1.06	10.66	11.46	1.38	12.84
Average total income rate	11.23	1.26	12.50	11.45	1.41	12.87

[1] Cost rates and taxable payroll are calculated on the basis of the 1982 alternative II-B, which assumes ultimate annual increases of 5.5 percent in average wages in covered employment and 4 percent in the CPI, an ultimate annual unemployment rate of 5 percent, and an ultimate total fertility rate of 2.1 children per woman. The averages are computed over projection periods commencing with 1982. The average tax rate represents both the average payroll tax rate and the average total income rate because there was no tax concept other than the payroll tax prior to the 1983 amendments.

[2] See the text for a discussion of the items shown.

[3] Cost rates, total income rates, and taxable payroll are calculated on the basis of the 1983 alternative II-B, which is described in the text. The averages are computed over projection periods commencing with 1983.

Note: The definitions of cost rate, total income rate, taxable payroll, actuarial balance, and projection period are presented in the text. Totals do not necessarily equal the sum of rounded components.

The estimates shown in last year's report assumed an automatic benefit increase for June 1982 of 7.6 percent. When the CPI for March 1982 was announced about a month after the 1982 report was issued, the actual increase was calculated to be 7.4 percent.

The enactment of Public Law 97-248, the provisions of which are described in an earlier section, results in a minor change in the taxable payroll and, therefore, in the cost rates.

During the legislative development of the Social Security Amendments of 1983, revised estimates of the operations of the OASDI program were prepared for use by the Congress in the legislative decision-making process. The following five changes were made at that time and, except as noted, form the basis for the estimates in this report.

In changing from the valuation periods of last year's report, which were 1982-2006 and 1982-2056 for the medium-range and long-range periods, respectively, to the valuation periods of this report, 1983-2007 and 1983-2057, the year 1982 is replaced by 2007 in the medium range and by 2057 in the long range. In the medium-range period, the OASDI estimated balance in the replacement year is higher than that in the year being replaced, thereby increasing the actuarial balance. In the long-range period, the opposite situation exists.

The ultimate total fertility rate was lowered from 2.1 to 2.0 to reflect the continuing low level of fertility in the United States. This change results in a significant decrease in the long-range actuarial balance but has no significant effect on the medium-range actuarial balance. The demographic assumptions for this year's report also include the results of the 1980 Census, which were not available in time for the 1982 report. The 1980 Census shows a significantly larger population, and in particular, a larger working population, for 1980 than had been estimated before the census. This change results in a significant increase in both the medium-range and long-range actuarial balances. However, in the long range, because of the large opposite effect of the change in the fertility assumption, the net effect of the changes in the demographic assumptions is to lower the actuarial balance.

The ultimate economic assumptions in alternative II-B are the same as in last year's report with the exception of the unemployment rate which was changed from 5.0 to 5.5 percent. However, the economic assumptions in the short-range period were revised to reflect the depth and duration of the 1981-82 recession, the rise in unemployment, and the significant drop in inflation. This results in a moderate decrease in the medium-range actuarial balance and a smaller decrease in the long-range actuarial balance. After the enactment of the 1983 amendments, these short range assumptions were revised slightly, as described later.

Changes in the assumed disability incidence and termination rates were made to reflect more recent experience. These changes result in increases in both the medium-range and long-range actuarial balances.

The estimates in last year's report reflect an implicit assumption that no State and local government entities would withdraw from the OASDI system. Prior to the enactment of the 1983 amendments, which prohibit such withdrawal (as described earlier), the cost estimates were revised to reflect an explicit assumption regarding the cost effect of such withdrawals.

Numerous minor changes have been made in other factors and in the methods used to project the OASDI cost rates. The net effect of these changes is a minor decrease in the OASI actuarial balances and a minor increase in the DI actuarial balances.

The enactment of the Social Security Amendments of 1983 has resulted in major increases in the actuarial balances of the OASDI system. The provisions of this law are discussed in significant detail earlier in this report.

After the enactment of the Social Security Amendments of 1983, the short-range economic assumptions were changed to reflect the significant turn-around in economic activity which began early this year and which was not anticipated in the preliminary economic assumptions that were made last fall.

VIII. CONCLUSION

The Social Security Amendments of 1983 have restored the financial soundness of the OASDI program for many years into the future. This is the case in the short range, on the basis of all four alternative sets of assumptions shown in this report, and in the long range, on the basis of all but the most pessimistic of the four sets.

The short-range projections shown in this report are in marked contrast to those shown in the last three annual reports, all of which indicated that the assets of the OASI Trust Fund would soon become insufficient to permit the timely payment of benefits. As discussed in earlier sections of this report, the assets of the OASI Trust Fund were sufficient to permit benefits to be paid on time through June 1983 only because of temporary legislative changes, including the interfund borrowing authority under which loans were made from the DI and HI Trust Funds to the OASI Trust Fund in the latter part of 1982. On the basis of the economic and demographic assumptions presented in this report, the 1983 amendments would enable OASI and DI benefits to be paid on time in the short range and for many years thereafter.

The long-range projections shown in this report are in marked contrast to those of the last decade, which indicated substantial deficits over the 75-year projection period. On the basis of the intermediate alternative II-B assumptions, the program is currently in long-range actuarial balance. This actuarial balance consists of average surpluses of 1.83 and 0.32 percent of taxable payroll over the first and second 25-year subperiods, respectively, and an average deficit of 2.08 percent over the third 25-year subperiod of the 75-year projection period. Thus, the actuarial balance is a moving average, and continuing review of the financing of the OASDI program is necessary.

While the OASDI program is expected to be able to pay benefits on time for many years into the future, the trust-fund levels are estimated to be relatively low through 1987. If economic conditions in 1984-87 are worse than those assumed under the pessimistic alternative III assumptions, the OASDI program could again experience financial difficulties in the near future. After 1987, the program's ability to withstand economic downturns is projected to steadily improve.

The assets of the OASI Trust Fund are estimated to increase enough to allow for the complete repayment, before 1989, of the $12.4 billion borrowed from the HI Trust Fund and, before 1990, of the $5.1 billion borrowed from the DI Trust Fund. The repayments to the HI Trust Fund are expected to be completed before the projected depletion of that fund in the late 1980's or early 1990's. As shown in the concurrent annual report for the HI Trust Fund, prompt repayment will be essential considering that fund's impending depletion. Repayment to the DI Trust Fund is assumed to occur slightly later, because for DI such repayment is not expected to be necessary to meet ongoing benefit payments.

APPENDIX A.—ASSUMPTIONS AND METHODS UNDERLYING THE MEDIUM-RANGE AND LONG-RANGE COST ESTIMATES

This appendix describes the assumptions and methods which underlie the medium-range and long-range cost estimates in this report. The descriptions pertain to the estimates under all of the four alternatives unless specifically stated otherwise. The basic assumptions comprising each alternative have been summarized in an earlier section entitled "Economic and Demographic Assumptions" and thus will be discussed here only in the context of the methods used. Further details about the assumptions, methods, and cost estimates will be published by the Office of the Actuary, Social Security Administration, shortly after the issuance of this report.

TOTAL POPULATION

Projections were made of the population in the Social Security Area by age, sex, and marital status for future years through 2060. The starting point was the U.S. population, including armed forces overseas on July 1, 1981, as estimated by the Bureau of the Census, based on the 1980 Census and adjusting for births, deaths, and net immigration during 1980-81. This population estimate was adjusted for net census undercount and was increased by the estimated populations in the geographic areas covered by the OASDI program but not included in the estimate made by the Bureau of the Census. The population in future years was then projected using assumed rates of birth and death and assumed net immigration.

Historically, fertility rates in the United States have fluctuated widely. The total fertility rate is defined to be the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year and if she were to survive the entire childbearing period. It decreased from 3.3 after World War I to 2.1 during the Great Depression, rose to about 3.7 in 1957 and then fell to 1.7 in 1976. Since that time, the total fertility rate has been around 1.8 children per woman.

The past variations in fertility rates have resulted from changes in social attitudes, economic conditions, and medical knowledge. Future fertility rates may exceed the present low level because such a low level has never been experienced in the United States over a long period of time, and because such a level is well below that needed to maintain a stable population, in the absence of increased immigration. There are, however, forces consistent with a continued low trend, such as the rising percentages of women never married, of women who are divorced, and of young women in the labor force. After considering these factors, ultimate total fertility rates of 2.3, 2.0, 2.0, and 1.6 children per woman were selected for alternatives I, II-A, II-B, and III, respectively. For each alternative, the total fertility rate was projected to reach its ultimate level in 2007. These ultimate values can be compared with those used by the Bureau of the Census in its latest series of population projections.[1] The Bureau of the Census used a range of 1.6 to 2.3, with an intermediate assumption of 1.9. A rate of 2.1 would result in a nearly constant population if there were no net migration and if mortality were constant at levels close to current U.S. levels.

Historically, mortality rates in the United States have declined steadily. The age-adjusted death rate is the crude rate that would occur in the enumerated total population as of April 1, 1970, if that population were to experience the death rates by age for the selected year. It has declined at an average rate of 1.2 percent per year since 1900. The past reductions in mortality rates have resulted from many factors, including increased medical knowledge, increased availability of health-care services, and improvements in personal health-care practices such as diet and exercise. After considering how these and other factors might affect mortality, three alternative sets of annual percentage reductions in central death rates by sex and cause of death were assumed for the year 2007 and later. Of these three sets of assumptions, the second set, which is used for both alternatives II-A and II-B, is considered most likely to be realized. The average percentage reductions assumed in alternative I are less than those in alternatives II-A and II-B, while the average annual reductions assumed in alternative III are greater. Prior to 2007, mortality reductions under alternatives II-A and II-B are assumed to change gradually from the average annual reductions by age group, sex, and cause of death observed during 1968-78 to the annual reductions by sex and cause of death assumed for 2007 and later. Alternative I mortality reductions are assumed to change gradually from 50 percent of the average annual reductions observed during 1968-78, while alternative III mortality improvement is assumed to change gradually from 150 percent of the average annual improvement observed during 1968-78.

After adjustment for changes in the age distribution of the population, mortality under alternatives II-A and II-B is projected to decline at an average annual rate of about 0.6 percent per year during 1981-2057. This is about half the average rate of decline observed during 1900-1981.

Net immigration was assumed to be 450,000, 400,000, 400,000, and 350,000 persons per year in alternatives I, II-A, II-B, and III, respectively. The assumed net immigration does not include aliens entering the United States illegally, largely because no reliable estimate of their number exists. However, no significant emigration is assumed for the same reason. Those illegal aliens who were enumerated in the 1980 Census were automatically included in the starting population.

Table A1 shows the projected population by broad age groups under all four alternatives. Because many categories of OASDI benefits depend upon marital status, the population was projected by marital status as well as by age and sex. Marriage rates and divorce rates were based on recent data from the National Center for Health Statistics.

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[1] U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 922, "Projections of the Population of the United States: 1982-2050 (Advanced Report)," U.S. Government Printing Office, Washington, D.C., October 1982.

TABLE A1.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS BY ALTERNATIVE AND BROAD AGE GROUP, CALENDAR YEARS 1960-2060

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[1]	Total[2]
1960	73,108	98,689	17,147	188,943	0.174	0.915
1965	79,959	104,121	18,952	203,032	.182	.950
1970	80,737	112,606	20,681	214,024	.184	.901
1975	79,041	122,615	23,300	224,956	.190	.835
1980	75,620	134,475	26,321	236,417	.196	.758
Alternative I:						
1985	74,011	144,516	29,147	247,674	.202	.714
1990	75,779	151,306	32,052	259,139	.212	.713
1995	78,775	157,229	33,919	269,922	.216	.717
2000	81,542	163,875	34,610	280,028	.211	.709
2005	83,227	171,593	35,455	290,275	.207	.692
2010	85,537	177,677	37,992	301,206	.214	.695
2015	88,770	180,152	43,278	312,201	.240	.733
2020	92,479	180,872	49,413	322,765	.273	.784
2025	95,761	180,926	56,050	332,737	.310	.839
2030	98,378	183,078	60,872	342,328	.332	.870
2035	101,158	188,057	62,553	351,768	.333	.871
2040	104,444	194,484	62,225	361,153	.320	.857
2045	108,047	200,994	61,562	370,604	.306	.844
2050	111,559	206,559	62,312	380,430	.302	.842
2055	114,854	212,401	63,773	391,029	.300	.841
2060	118,153	219,163	65,305	402,620	.298	.837
Alternatives II-A and II-B:						
1985	73,811	144,510	29,406	247,727	.203	.714
1990	74,747	151,265	32,659	258,670	.216	.710
1995	76,336	157,178	35,077	268,590	.223	.709
2000	77,192	163,823	36,338	277,353	.222	.693
2005	76,486	171,436	37,681	285,603	.220	.666
2010	76,311	176,767	40,687	293,765	.230	.662
2015	77,108	177,840	46,492	301,440	.261	.695
2020	78,325	176,605	53,222	308,152	.301	.745
2025	79,097	174,079	60,584	313,759	.348	.802
2030	79,257	172,948	66,215	318,420	.383	.841
2035	79,410	174,193	68,673	322,275	.394	.850
2040	79,937	176,402	69,014	325,354	.391	.844
2045	80,711	178,177	68,860	327,748	.386	.839
2050	81,381	178,466	69,919	329,766	.392	.848
2055	81,817	178,929	71,100	331,846	.397	.855
2060	82,179	180,213	71,913	334,305	.399	.855
Alternative III:						
1985	73,526	144,489	29,615	247,630	.205	.714
1990	73,294	151,197	33,215	257,705	.220	.704
1995	72,956	157,073	36,153	266,183	.230	.695
2000	71,232	163,690	38,001	272,923	.232	.667
2005	67,402	171,117	39,976	278,495	.234	.628
2010	64,115	175,397	43,695	283,208	.249	.615
2015	62,023	174,605	50,366	286,994	.288	.644
2020	60,497	170,809	58,142	289,448	.340	.695
2025	58,736	164,932	66,794	290,462	.405	.761
2030	56,638	159,587	73,914	290,140	.463	.818
2035	54,476	156,158	77,918	288,552	.499	.848
2040	52,663	153,262	79,747	285,673	.520	.864
2045	51,167	149,480	80,909	281,556	.541	.884
2050	49,734	143,785	82,955	276,473	.577	.923
2055	48,223	138,484	84,172	270,879	.608	.956
2060	46,705	134,234	84,260	265,199	.628	.976

[1] Population aged 65 and over as ratio to population aged 20-64.

[2] Population aged 55 and over plus population under age 20 as ratio to population aged 20-64.

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text. Totals do not necessarily equal the sum of rounded components.

COVERED POPULATION

The number of covered workers in a year is defined as the number of persons who work in covered employment at any time during that year. Projections of the number of covered workers were made by applying projected coverage rates to the number of people in the total population. The coverage rates—i.e., the number of workers with covered earnings in the year as a percentage of the total population—were projected by age and sex using projected labor force participation rates and unemployment rates, and their historical relationships to coverage rates. In addition, the coverage rates were adjusted to reflect the increases in covered employment in the non-profit and Federal government sectors of the economy that will result from the 1983 amendments.

Labor force participation rates were projected by age and sex, taking into account projections of the percentage of the population that is married, the percentage of the population that is disabled, the number of children in the population, and the state of the economy. In addition, recent trends in the labor force participation rates that cannot be fully explained by the above factors (such as much of the recent increase in the rate for women) were assumed to continue through the year 2000. All of these factors vary by alternative. For men, the projected age-adjusted labor force participation rates under alternatives I, II-A, and II-B for 2060 are, respectively, 3.3, 1.7, and 0.6 percentage points higher than the 1982 level of 76.7 percent, while the rate for alternative III is 0.9 percentage points lower. For women, the projected age-adjusted labor force participation rates increase under all of the alternatives. The assumed rates for 2060 are 10.4, 9.2, 7.4, and 6.5 percentage points, respectively, above the 1982 level of 52.7 percent.

The total age-sex-adjusted unemployment rate has averaged 5.2 percent over the 30 years 1953-82 and 6.8 percent over the 10 years 1973-82. The ultimate total age-sex-adjusted unemployment rates were assumed to be 4.0, 5.0, 5.5, and 6.5 percent in alternatives I, II-A, II-B, and III, respectively. In each alternative the unemployment rates are assumed to decline gradually, reaching their ultimate levels by the mid-1990's.

The projected age-adjusted coverage rate for men increases from its 1982 level of 73.8 percent to 80.0, 78.2, 77.1, and 75.3 percent in 2060 under alternatives I, II-A, II-B, and III, respectively. Correspondingly, for women, it increases from its 1982 level of 52.7 percent to 68.0, 66.2, 64.3, and 62.8 percent, respectively.

TAXABLE PAYROLL

The taxable payroll is that amount which, when multiplied by the combined employee-employer tax rate, yields the total amount of taxes paid by employees, employers, and the self-employed. Taxes paid by employers include, in 1983 and later, government contributions for deemed wage credits for military service. The taxable payroll is important not just in projecting OASDI income but also in defining cost rate, income rate, and actuarial balance. The cost rate is the cost of the OASDI program expressed as a percentage of taxable payroll. The income rate is the combined OASDI employee-employer tax rate plus the income from the taxation of benefits expressed as a percentage of taxable payroll. When both the cost rate and the income rate are defined in this way, they can be compared directly to determine whether the actuarial balance is positive or negative.

In practice, the taxable payroll is calculated as a weighted average of the earnings on which employees, employers, and self-employed persons are taxed. The weighting takes into account the lower tax rates on tips, multiple-employer "excess wages," and self-employment income through 1983, as compared with the combined employee-employer rate. For 1983-92, the amounts of earnings for employees, employers, and the self-employed were projected separately. For 1993 and later, the amounts of taxable earnings for employees, employers, and the self-employed were each assumed to increase at the compounded growth rates for numbers of covered workers and average wages in covered employment.

The cost of the OASDI program can also be expressed as a percentage of the Gross National Product (GNP). Such percentages (which are shown in table 30) are based on the estimated cost rates and on the assumed ratios of taxable payroll to GNP which are presented in table A2. The projections of GNP were developed by applying a series of factors to the assumed ratio of total employee compensation in the economy to GNP, which was used as the starting point because it is a measure of the share of output going to workers. This ratio is also a convenient starting point because it has changed slowly over time and can be expected to remain fairly constant. Total employee compensation in the economy was related to taxable payroll by means of factors which adjust for various differences in the two measures. The factors adjust total employee compensation by removing supplements to wages and salaries; removing wages and salaries earned in noncovered employment; removing wages, salaries, and self-employment income earned above the taxable base; and adjusting for the lower tax rates on tips, multiple-employer "excess wages," and self-employment income through 1983.

The ratio of taxable payroll to GNP has risen since 1960, in part because of ad hoc increases in the contribution and benefit base. It will increase further beginning in 1984 as a result of the expanded coverage provided by the 1983 amendments. The long-range trend, however, is more likely to be downward because of increases in the ratio of non-wage employee compensation to total compensation. The ratio of wages to total employee compensation is assumed to decline ultimately by 0.1, 0.2, 0.3, and 0.4 percent per year under alternatives I, II-A, II-B, and III, respectively. This ratio has declined at average annual rates of 0.40 percent over the 30 years 1953-82 and 0.49 percent over the 10 years 1973-82.

TABLE A2.—RATIO OF TAXABLE PAYROLL TO GNP BY ALTERNATIVE, CALENDAR YEARS 1960-2060

Calendar year	Past experience	Projected, by alternative			
		I	II-A	II-B	III
1960	0.391				
1965	.343				
1970	.417				
1975	.419				
1980	.433				
1983		0.451	0.451	0.452	0.454
1985		.442	.441	.441	.437
1990		.441	.437	.437	.432
1995		.441	.436	.433	.428
2000		.442	.434	.430	.422
2005		.442	.432	.426	.416
2010		.441	.429	.421	.409
2015		.439	.426	.415	.402
2020		.437	.422	.409	.395
2025		.435	.418	.404	.387
2030		.433	.414	.398	.380
2035		.431	.410	.392	.373
2040		.429	.406	.387	.366
2045		.427	.402	.381	.359
2050		.425	.398	.376	.352
2055		.423	.394	.371	.346
2060		.421	.391	.365	.339

Note: The definitions of alternatives I, II-A, II-B, and III and taxable payroll are presented in the text.

INSURED POPULATION

There are three types of insured statuses under the OASDI program: fully, currently, and disability insured. Fully insured status is required of an aged worker for eligibility for a primary retirement benefit and for the eligibility of other persons to auxiliary benefits based on the worker's earnings. Fully insured status is also required of a deceased worker for survivors' eligibility for benefits (with the exception of child survivors and parents of eligible child survivors, in which cases the deceased worker is required to have had only currently insured status). Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for eligibility for a primary benefit and for the eligibility of other persons to auxiliary benefits based on the disabled worker's earnings.

Projections of the percentage of the population that is fully insured were made by age and sex based on past and projected coverage rates, the requirement for fully insured status, and the historical relationship between these factors. Currently insured status was disregarded in the cost projection, because the number of cases in which eligibility for benefits is based solely on currently insured status is relatively small. Projections of the percentage of the population that is disability insured were developed from the percentages of those who are fully insured by using projections of historical trends relating the two. Finally, the fully insured and disability insured populations were developed from the projected total population by applying the appropriate percentages.

The fully insured population by age and sex was further subdivided by marital status, in a manner consistent with the division of the total population by marital status. Married men were assumed more likely to be fully insured than were widowers who, in turn, were assumed more likely to be fully insured than were single and divorced men. By contrast, single and divorced women were assumed more likely to be fully insured than were widows who, in turn, were assumed more likely to be fully insured than were married women. The relative difference between a widowed woman's probability of being fully insured and a married woman's was assumed to decrease through time, reflecting the projected large increase in labor force participation among married women.

OLD-AGE AND SURVIVORS INSURANCE BENEFICIARIES

Several types of benefits, at different benefit levels, are payable under the OASI program. Hence, the numbers of beneficiaries were projected by type of benefit.

The projected numbers of retired-worker beneficiaries were based on the projected aged fully insured population. The numbers of beneficiaries, by age and sex, as percentages of the insured population were projected to increase slightly until 1990 on the basis of past trends. In 1990 the percentages for ages 65 to 69 increase because of the change in the retirement earnings test included in the 1983 amendments. Beginning in the year 2000, the percentages decline for ages 62 through 69 because of the change in normal retirement age included in the 1983 amendments. Ultimate percentages are reached in the year 2030.

The number of wife beneficiaries aged 62 and over of retired-worker beneficiaries was estimated from the population projection by marital and insured status. All uninsured wives aged 62 and over—excluding those whose husbands do not receive retired-worker benefits, those whose benefits are withheld according to the retirement earnings test, and those affected by eligibility for a governmental pension from earnings in noncovered employment—were assumed to receive benefits. Beginning in 1985, an increase in the number of aged wife beneficiaries is projected because, as a result of the 1983 amendments, eligible divorced wives will no longer be required to wait to receive benefits until their former husbands are receiving benefits. The number of husband beneficiaries aged 62 and over of retired-worker beneficiaries was estimated in an analogous manner.

The projected numbers of eligible children (including disabled adult children and certain students aged 18 or over) of retired-worker beneficiaries were based on projected ratios of the number of such child beneficiaries to the number of retired workers by sex of worker, adjusted to reflect the fertility assumptions.

The number of young-wife beneficiaries was estimated by extrapolating the historial ratios of the number of such beneficiaries to the estimated number of child beneficiaries who are children of male retired-worker beneficiaries, and are either under age 16 or disabled with onset of disability before age 22. The estimating procedure takes into account projected changes in fertility and female labor force participation. The number of young-husband beneficiaries was not projected because of the negligible cost attributable to them.

The number of widow beneficiaries aged 60 and over was estimated from the population by marital and insured status. Virtually all uninsured widows aged 60 and over, excluding those whose deceased husbands were not fully insured, those whose benefits are withheld according to the retirement earnings test, and those affected by eligibility for a governmental pension from earnings in noncovered employment, were assumed to receive benefits. In addition, some insured widows who had not applied for retired-worker benefits were assumed to receive widow benefits. The number of widower beneficiaries was estimated in an analogous manner.

The numbers of paternal, maternal, and full orphans under age 18 in the United States were estimated from the projected population at those ages by applying age-specific probabilities of being an orphan. These probabilities were derived by using distributions of age of parent at birth of child and death rates consistent with the population projections. To estimate the number of child-survivor beneficiaries, the number of orphans was adjusted to include eligible disabled orphans and certain students aged 18 and over, and to eliminate orphans of uninsured deceased parents.

The number of mother beneficiaries was estimated by a method similar to the one used to estimate the number of young-wife beneficiaries—i.e., extrapolating the present ratio of such beneficiaries to child-survivor beneficiaries who are either under age 16 or disabled with onset of disability before age 22. The number of father beneficiaries was estimated in an analogous manner.

The number of parent beneficiaries was projected on the basis of the past trend in the number of such beneficiaries. A decrease was assumed from the actual figure of 13,000 in the middle of 1982 to an ultimate level of 7,000 in 1995.

Table A3 shows the estimated numbers of beneficiaries under the OASI program. Included among the beneficiaries who receive retired-worker benefits are some persons who also receive residual benefits consisting of the excess of any potential auxiliary benefits over their retired-worker benefits. Estimates of the number of such residual payments were made separately for wives, widows, husbands, and widowers. Residual payments to other beneficiaries were not taken into account, because of the negligible cost involved.

TABLE A3.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 BY ALTERNATIVE, CALENDAR YEARS 1960-2060

[In thousands]

	Retired workers and auxiliaries			Survivors				
Calendar year	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	Total
1960	7,813	2,224	260	1,471	388	1,549	35	13,740
1965	10,843	2,601	429	2,228	472	1,900	36	18,509
1970	13,066	2,651	535	3,151	514	2,673	29	22,618
1975	16,210	2,836	633	3,823	568	2,905	22	26,998
1976	16,789	2,867	638	3,939	576	2,911	21	27,740
1977	17,380	2,899	670	4,042	573	2,843	19	28,426
1978	17,924	2,942	662	4,147	569	2,800	18	29,062
1979	18,590	2,966	651	4,260	567	2,739	17	29,789
1980	19,167	2,987	633	4,354	560	2,668	15	30,385
1981	19,792	3,010	639	4,446	549	2,624	14	31,074
1982	20,392	3,019	522	4,540	520	2,201	13	31,207
Alternative I:								
1983	20,964	3,028	536	4,615	492	2,210	12	31,856
1985	22,351	3,104	506	4,749	460	1,962	10	33,142
1990	25,162	3,264	508	5,047	439	1,803	8	36,230
1995	26,642	3,294	520	5,161	463	1,985	7	38,072
2000	27,515	3,166	523	5,100	500	2,097	7	38,908
2005	28,742	3,029	548	5,000	526	2,196	7	40,048
2010	31,472	3,022	621	4,941	542	2,289	7	42,894
2015	36,494	3,163	747	4,915	555	2,368	7	48,249

TABLE A3.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 BY ALTERNATIVE, CALENDAR YEARS 1960-2060 (Cont.)

[In thousands]

Calendar year	Retired workers and auxiliaries			Survivors				Total
	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	
Alternative I: (Cont.)								
2020	42,295	3,289	863	4,961	555	2,434	7	54,424
2025	47,737	3,336	936	5,103	550	2,494	7	60,163
2030	51,621	3,255	949	5,199	551	2,545	7	64,127
2035	53,652	3,090	932	5,252	566	2,602	7	66,101
2040	53,739	2,886	897	5,209	586	2,672	7	65,996
2045	53,833	2,768	905	5,129	602	2,741	7	65,965
2050	54,692	2,775	943	5,032	616	2,821	7	66,886
2055	56,048	2,847	983	4,969	631	2,898	7	68,383
2060	57,450	2,926	1,005	4,961	650	2,971	7	69,970
Alternative II-A:								
1983	20,977	3,030	536	4,625	492	2,210	12	31,882
1985	22,401	3,113	506	4,772	460	1,960	10	33,222
1990	25,436	3,308	506	5,113	432	1,770	8	36,572
1995	27,512	3,459	528	5,216	421	1,787	7	38,930
2000	28,833	3,390	525	5,174	434	1,790	7	40,153
2005	30,457	3,300	551	5,101	438	1,782	7	41,636
2010	33,570	3,330	612	5,052	443	1,789	7	44,803
2015	39,027	3,506	721	5,027	446	1,791	7	50,527
2020	45,328	3,687	821	5,084	438	1,789	7	57,154
2025	51,391	3,782	887	5,192	427	1,785	7	63,471
2030	55,963	3,744	897	5,302	418	1,770	7	68,101
2035	58,711	3,599	883	5,380	419	1,764	7	70,763
2040	59,387	3,404	852	5,379	424	1,758	7	71,211
2045	59,961	3,277	856	5,328	423	1,756	7	71,606
2050	61,015	3,273	889	5,231	420	1,753	7	72,588
2055	62,116	3,318	911	5,131	419	1,751	7	73,653
2060	62,895	3,364	913	5,056	419	1,748	7	74,402
Alternative II-B:								
1983	20,977	3,030	536	4,625	492	2,210	12	31,882
1985	22,401	3,113	506	4,772	460	1,960	10	33,222
1990	25,435	3,308	506	5,113	432	1,770	8	36,571
1995	27,504	3,462	528	5,218	421	1,787	7	38,927
2000	28,814	3,396	524	5,180	434	1,787	7	40,144
2005	30,422	3,312	550	5,109	438	1,782	7	41,620
2010	33,509	3,352	611	5,063	442	1,786	7	44,770
2015	38,929	3,543	719	5,050	446	1,789	7	50,483
2020	45,193	3,735	819	5,114	438	1,787	7	57,093
2025	51,214	3,852	885	5,230	426	1,781	7	63,395
2030	55,750	3,829	896	5,354	418	1,770	7	68,024
2035	58,462	3,694	882	5,447	419	1,760	7	70,671
2040	59,131	3,503	850	5,459	423	1,757	7	71,130
2045	59,686	3,382	855	5,420	422	1,753	7	71,527
2050	60,727	3,384	887	5,332	420	1,751	7	72,506
2055	61,807	3,431	909	5,239	418	1,749	7	73,560
2060	62,582	3,480	911	5,162	419	1,747	7	74,308
Alternative III:								
1983	20,988	3,032	536	4,632	492	2,210	12	31,902
1985	22,444	3,121	505	4,798	458	1,955	10	33,290
1990	25,689	3,348	502	5,191	422	1,728	8	36,888
1995	28,309	3,615	537	5,261	383	1,610	7	39,722
2000	30,068	3,627	529	5,249	373	1,509	7	41,362
2005	32,160	3,610	539	5,195	358	1,399	7	43,288
2010	35,836	3,717	579	5,163	348	1,322	7	46,972
2015	41,958	4,004	663	5,151	340	1,249	7	53,372
2020	49,115	4,292	736	5,197	325	1,184	7	60,856
2025	56,227	4,505	790	5,294	308	1,123	7	68,254
2030	62,055	4,589	803	5,390	292	1,069	7	74,205
2035	66,152	4,548	792	5,495	281	1,012	7	78,287
2040	68,151	4,411	765	5,557	271	958	7	80,120
2045	69,908	4,314	769	5,553	256	914	7	81,721
2050	71,711	4,313	788	5,487	243	870	7	83,419
2055	72,827	4,332	789	5,363	232	829	7	84,379
2060	72,990	4,318	776	5,228	221	794	7	84,334

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text. The numbers of beneficiaries do not include certain uninsured persons, most of whom attained age 72 before 1968 and have less than 3 quarters of coverage, and for whom the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 68,923 as of June 30, 1982, and is estimated to be less than 500 by the turn of the century. Totals do not necessarily equal the sum of the rounded components.

DISABILITY INSURANCE BENEFICIARIES

The number of disabled-worker beneficiaries was projected from the exposed population, which was developed from the disability insured population by removing those persons already entitled to disabled-worker benefits. The number of newly entitled beneficiaries was developed from the exposed population by applying assumed disability incidence rates by age and sex. To obtain the number of currently entitled beneficiaries, assumed termination rates were applied to the currently entitled disabled-worker population.

The disability incidence rates, which declined during 1978-82, are assumed to increase steadily from 1983 through 2002, when they reach an ultimate level which, under alternatives II-A and II-B, is about 15 percent higher than the average level for 1980-82. In alternatives I and III, the disability incidence rates follow patterns similar to the one in alternatives II-A and II-B except that the ultimate levels are the same as the average for 1980-82 and 30 percent higher, respectively.

The termination rates were estimated by age, sex, and duration of entitlement. The mortality rates used throughout the projection period were assumed to be the same as those experienced by disabled-worker beneficiaries during 1977-80. The recovery rates were assumed to be 20 percent higher than those of the same period, thereby allowing for the assumed effect of the periodic reviews required by the Social Security Disability Amendments of 1980. All disabled-worker benefits are automatically converted to old-age benefits at normal retirement age.

The number of eligible children (including disabled adult children and certain students aged 18 or over) was projected as a proportion of the number of disabled-worker beneficiaries, by sex, based on recent experience and allowing for projected changes in fertility.

The number of young-wife beneficiaries was estimated by extrapolating the historical ratios of the number of such beneficiaries to the estimated number of child beneficiaries who are children of male disabled-worker beneficiaries and are either under age 16 or disabled with onset of disability before age 22. The estimating procedure takes into account projected changes in fertility and female labor force participation. The number of young-husband beneficiaries was projected in an analogous manner.

The number of aged-wife beneficiaries was projected as a proportion of the number of male disabled-worker beneficiaries. The number of aged-husband beneficiaries was projected in an analogous manner.

Table A4 shows the projected number of beneficiaries in the DI program.

TABLE A4.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 BY ALTERNATIVE, CALENDAR YEARS 1960-2060

[In thousands]

Calendar year	Disabled workers	Dependents of disabled workers: Wives and husbands	Dependents of disabled workers: Children	Total
1960	371	56	94	522
1965	944	187	518	1,648
1970	1,436	271	861	2,568
1975	2,363	429	1,333	4,125
1976	2,602	468	1,462	4,533
1977	2,755	482	1,496	4,733
1978	2,858	491	1,512	4,861
1979	2,877	483	1,466	4,826
1980	2,863	468	1,403	4,734
1981	2,835	450	1,350	4,636
1982	2,713	399	1,071	4,184
Alternative I:				
1983	2,570	362	996	3,928
1985	2,484	318	952	3,754
1990	2,495	312	936	3,743
1995	2,531	301	873	3,705
2000	2,851	332	967	4,149
2005	3,908	378	1,087	5,371
2010	4,092	423	1,211	5,725
2015	4,378	455	1,315	6,148
2020	4,505	477	1,388	6,370
2025	4,713	483	1,399	6,595
2030	4,709	475	1,367	6,551
2035	4,634	472	1,367	6,473
2040	4,755	486	1,416	6,656
2045	4,945	509	1,485	6,939
2050	5,043	524	1,532	7,100
2055	5,196	535	1,560	7,291
2060	5,294	546	1,597	7,437
Alternative II-A:				
1983	2,571	362	996	3,929
1985	2,497	319	957	3,773
1990	2,589	324	971	3,883
1995	2,762	321	924	4,008
2000	3,182	355	1,023	4,559
2005	4,349	401	1,134	5,884
2010	4,612	444	1,240	6,305
2015	4,956	472	1,326	6,743
2020	5,092	489	1,379	6,960
2025	5,271	490	1,371	7,132
2030	5,220	477	1,324	7,020
2035	5,108	468	1,303	6,879
2040	5,193	475	1,328	6,996
2045	5,319	489	1,366	7,173
2050	5,305	491	1,375	7,172
2055	5,332	489	1,365	7,191
2060	5,324	487	1,362	7,173
Alternative II-B:				
1983	2,571	362	996	3,929
1985	2,496	319	957	3,773
1990	2,588	323	970	3,881
1995	2,761	321	924	4,006
2000	3,178	355	1,022	4,555
2005	4,344	401	1,133	5,878
2010	4,614	444	1,239	6,297
2015	4,945	472	1,324	6,741
2020	5,080	489	1,378	6,947
2025	5,258	490	1,369	7,117
2030	5,206	476	1,321	7,003
2035	5,094	467	1,301	6,862
2040	5,179	475	1,326	6,980
2045	5,304	489	1,363	7,156
2050	5,290	491	1,373	7,153
2055	5,323	489	1,362	7,174
2060	5,309	487	1,359	7,155

TABLE A4.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 BY ALTERNATIVE, CALENDAR YEARS 1960-2060 (Cont.)
[In thousands]

Calendar year	Disabled workers	Dependents of disabled workers: Wives and husbands	Dependents of disabled workers: Children	Total
Alternative III:				
1983	2,572	362	997	3,931
1985	2,505	320	961	3,786
1990	2,668	333	1,001	4,002
1995	2,990	336	958	4,284
2000	3,506	369	1,042	4,917
2005	4,781	408	1,118	6,307
2010	5,137	442	1,179	6,757
2015	5,513	461	1,222	7,196
2020	5,653	468	1,237	7,358
2025	5,792	461	1,202	7,455
2030	5,679	441	1,137	7,258
2035	5,508	425	1,094	7,027
2040	5,521	422	1,086	7,029
2045	5,521	423	1,082	7,026
2050	5,319	409	1,050	6,779
2055	5,163	393	1,002	6,558
2060	4,974	377	962	6,313

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text. Totals do not necessarily equal the sum of rounded components.

AVERAGE WAGES AND INFLATION

Future increases in the Consumer Price Index and in average wages will directly affect the OASDI program. In addition to the direct effect of higher wages on taxable payroll and on benefits subsequently based on that higher payroll, the automatic adjustment provisions in the law require that the benefit formula, the taxable earnings base, the exempt amounts under the retirement earnings test, and the amount of earnings required for a quarter of coverage be adjusted to reflect increases in average wages, and that benefit payments be adjusted to reflect increases in the CPI.

The ultimate real-wage differentials were based primarily on projections of historical trends. Both the analysis of these trends and the projections took into account productivity gains and the factors linking productivity gains with the real-wage differential. Over the 30 years 1952-82, annual increases in productivity have averaged 2.1 percent, the result of average increases of 0.9, 2.8, and 2.7 percent in each of the 10-year periods 1972-82, 1962-72, and 1952-62, respectively. Meanwhile, the real-wage differential has averaged 1.1 percent over the 30 years 1953-82, the result of an average decrease of 0.9 percent and average increases of 1.8 and 2.5 percent, respectively, in the previously mentioned periods. The linkage between annual increases in productivity and the real-wage differential has averaged 1.0 percent over the 30 years 1953-82 and 1.8 percent over the 10 years 1973-82. The linkage reflects changes in such factors as the average number of hours worked per year, the extent to which employees share in the returns of production, and the proportion of employee compensation paid as wages.

The ultimate annual increases in productivity are assumed to be 2.7, 2.4, 2.1, and 1.8 percent for alternatives I, II-A, II-B, and III, respectively. The corresponding ultimate annual declines in the linkage were assumed to be 0.2, 0.4, 0.6, and 0.8 percent. The resulting ultimate real-wage differentials were 2.5, 2.0, 1.5, and 1.0 percent.

In alternative II-A, the CPI was assumed to increase ultimately at an annual rate of 3 percent. In alternative II-B, the CPI was assumed to increase ultimately at an annual rate of 4 percent, which is slightly lower than the average of 4.3 percent experienced over the 30 years 1952-82. The ultimate increases in the average annual CPI under alternatives I and III of 2 percent and 5 percent, respectively, were chosen to include a reasonable range of possible values.

The ultimate increases in average annual wages in covered employment were assumed to be 4.5, 5.0, 5.5, and 6.0 percent, for alternatives I, II-A, II-B, and III, respectively. These were obtained by adding the corresponding annual percentage increases in the CPI to the assumed real-wage differentials for each alternative.

AVERAGE BENEFITS

Future increases in the average primary insurance amount (PIA) for newly awarded benefits were projected by simulating the automatic benefit adjustment provisions and calculating future PIA's for workers, by sex, at various earnings levels. Separate projections of average PIA were made based on the earnings of male and female workers and in each case for four separate benefit-type categories: retired workers and their families, young survivors, aged survivors, and disabled workers and their families.

Future increases in the average PIA for beneficiaries in current-payment status were projected by sex of worker and type of benefit on the basis of the distribution of current beneficiaries by year of award, their average awarded PIA, and the increase in their average PIA since the year of award.

For several types of benefits, the percentage of PIA that is payable depends upon the age at which entitlement to benefits begins. Included are retired worker, aged spouse, aged widow(er), and disabled widow(er) benefits. Projected changes in the average benefit level as a percentage of PIA for each of these beneficiary types were based on projections of the age distribution at initial entitlement. The average percentage of PIA payable is projected to change significantly in future years because of several provisions included in the 1983 amendments, foremost of which is the provision to change the normal retirement age starting in the year 2000.

BENEFIT PAYMENTS

For each category of beneficiary, monthly benefit payments were calculated as the product of the number of beneficiaries and the corresponding average benefit. These amounts were then adjusted to include retroactive payments to newly awarded beneficiaries. Retroactive payments are made for months of entitlement between the date of application for benefits and the date of first payment and for as many as 6 months (or 12 months for disabled widow(er)s and for all DI beneficiaries) prior to the date of filing during which eligibility requirements are satisfied, but only if benefits are not thereby permanently reduced for early entitlement (widow(er)s are permitted one month of retroactive benefits in such cases, as a result of the 1983 amendments).

Lump-sum death payments were calculated as the product of the number of such payments, which was projected based on the assumed mortality rates, the projected fully insured population, the estimated percentage of the fully insured population that would qualify for benefits, and the amount of the lump-sum death payment, which is $255.00 in all cases.

ADMINISTRATIVE EXPENSES

The projection of administrative expenses through 1992 was based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For years after 1992, administrative expenses were assumed to increase at approximately the compounded rates of increase in the number of beneficiaries and in average wages in covered employment.

RAILROAD RETIREMENT FINANCIAL INTERCHANGE

The effect of the financial interchange with the Railroad Retirement program was evaluated on the basis of trends similar to those used in estimating the cost of OASDI benefits. The resulting effect was an average annual long-range cost to the OASDI system of 0.01 percent of taxable payroll.

BENEFITS TO UNINSURED PERSONS

The law provides for benefit payments to certain uninsured persons who attained age 72 before 1968. These benefits are paid from the OASI Trust Fund, which is then reimbursed in full (including interest and administrative expenses) from the general fund of the Treasury. Neither the benefit payments nor the reimbursements are reflected in the cost rates or the income rates. However, these amounts are reflected in tables which show trust fund operations.

APPENDIX B.—SENSITIVITY ANALYSIS

This appendix illustrates the sensitivity of the medium-range and long-range OASDI estimates to changes in certain assumptions. Although the estimates under the four alternatives illustrate the variations in the projected actuarial balances resulting from different combinations of assumptions, they do not show the variations resulting from changes in any single assumption. In this sensitivity analysis, alternative II-B is used as the starting set of assumptions, and one assumption at a time within that alternative is varied. Similar variations in the selected assumptions within the other alternatives would result in similar relative variations in actuarial balances.

Recent reports have illustrated the sensitivity of the estimates to changes in economic and demographic assumptions. Because of time constraints, this report shows only the sensitivity to economic assumptions.

CONSUMER PRICE INDEX

Table B1 shows the estimated average annual OASDI cost rate, total income rate, and balance on the basis of alternative II-B with various CPI assumptions. These assumptions are that the ultimate annual CPI increase will be 2 percent (as in alternative I), 3 percent (as in alternative II-A), 4 percent (as in alternative II-B), 5 percent (as in alternative III), and 6 percent. In each case the ultimate real-wage differential is assumed to be 1.5 percent (as under the unmodified alternative II-B), yielding ultimate percentage increases in average annual wages of 3.5, 4.5, 5.5, 6.5, and 7.5 percent, respectively. The annual CPI increase is assumed to gradually reach its ultimate value in 1989.

TABLE B1.—ESTIMATED AVERAGE ANNUAL OASDI COST RATE, TOTAL INCOME RATE, AND BALANCE UNDER ALTERNATIVE II-B WITH VARIOUS CONSUMER PRICE INDEX ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar years	Ultimate percentage increase in wages-CPI[1]				
	3.5-2	4.5-3	5.5-4	6.5-5	7.5-6
Average cost rate:					
1983-2007	10.88	10.77	10.66	10.56	10.46
2008-2032	13.04	12.83	12.64	12.44	12.26
2033-2057	15.73	15.47	15.23	14.98	14.76
1983-2057	13.22	13.02	12.84	12.66	12.49
Average total income rate:					
1983-2007	12.50	12.50	12.50	12.49	12.49
2008-2032	12.97	12.96	12.95	12.94	12.94
2033-2057	13.18	13.16	13.15	13.14	13.13
1983-2057	12.88	12.87	12.87	12.86	12.85
Balance:					
1983-2007	+1.62	+1.73	+1.83	+1.93	+2.03
2008-2032	-.07	+.13	+.32	+.50	+.68
2033-2057	-2.56	-2.31	-2.08	-1.85	-1.64
1983-2057	-.33	-.15	+.02	+.20	+.36

[1] The first value in each pair is the assumed annual percentage increase in average wages in 1993 and later years. The second value is the assumed annual percentage increase in CPI in 1989 and later years. The assumptions used in earlier years gradually merge into the ultimate values.

Note: The definitions of alternative II-B, cost rate, total income rate, balance, and taxable payroll are presented in the text.

Over both the medium-range and long-range periods, the average cost rate decreases as the assumed rate of change in the CPI increases. Over the medium range, the average cost rate decreases from 10.88 (for CPI increases of 2 percent) to 10.46 percent (for CPI increases of 6 percent). Over the long range, it varies from 13.22 to 12.49 percent.

The relationship described above results primarily from the time lag between the effect on income and on benefit outgo. When assuming a higher rate of increase in the CPI (in conjunction with a constant real-wage differential), the effect on income of the implied higher rate of increase in wages is experienced immediately, while the effect on benefits of the higher rate of increase in the CPI is experienced with about a half-year lag. In addition, the effect on benefits of the higher rate of increase in wages is experienced no earlier than 2 years later.

The average total income rate varies only slightly with changes in the CPI because most of the total income rate consists of the average payroll-tax rate, which is scheduled in the law and, therefore, not affected by economic assumptions. Thus, the actuarial balances vary by amounts similar in magnitude to the changes in the average cost rates, but in the opposite direction. The medium-range actuarial balance increases from 1.62 (for CPI increases of 2 percent) to 2.03 percent of taxable payroll (for CPI increases of 6 percent). The long-range balance increases from -0.33 to 0.36 percent.

REAL-WAGE DIFFERENTIAL

Table B2 shows the estimated average annual OASDI cost rate, total income rate, and balance, on the basis of alternative II-B with various real-wage assumptions. These assumptions are that the ultimate real-wage differential will be 1 percent (as in alternative III), 1.5 percent (as in alternative II-B), 2 percent (as in alternative II-A), and 2.5 percent (as in alternative I). In each case the ultimate annual CPI increase is assumed to be 4 percent (as under the unmodified alternative II-B), yielding ultimate percentage increases in average annual wages of 5, 5.5, 6, and 6.5 percent, respectively. The real-wage differential is assumed to gradually reach its ultimate value in 1993.

TABLE B2.—ESTIMATED AVERAGE ANNUAL OASDI COST RATE, TOTAL INCOME RATE, AND BALANCE UNDER ALTERNATIVE II-B WITH VARIOUS REAL-WAGE ASSUMPTIONS
[As a percentage of taxable payroll]

Calendar years	Ultimate percentage increase in wages-CPI[1]			
	5-4	5.5-4	6-4	6.5-4
Average cost rate:				
1983-2007	11.04	10.66	10.31	9.98
2008-2032	13.51	12.64	11.84	11.11
2033-2057	16.39	15.23	14.16	13.21
1983-2057	13.65	12.84	12.10	11.43
Average total income rate:				
1983-2007	12.51	12.50	12.48	12.47
2008-2032	12.99	12.95	12.92	12.88
2033-2057	13.21	13.15	13.10	13.05
1983-2057	12.90	12.87	12.83	12.80
Balance:				
1983-2007	+1.47	+1.83	+2.17	+2.50
2008-2032	-.52	+.32	+1.08	+1.78
2033-2057	-3.18	-2.08	-1.07	-.16
1983-2057	-.74	+.02	+.73	+1.37

[1] The first value in each pair is the assumed annual percentage increase in average wages in 1993 and later years. The second value is the assumed annual percentage increase in CPI in 1989 and later years. The difference between the two values is the real-wage differential. The assumptions used in earlier years gradually merge into the ultimate values.

Note: The definitions of alternative II-B, cost rate, total income rate, balance, and taxable payroll are presented in the text.

Over the medium-range period, the average cost rate varies from 11.04 (for real-wage differentials of 1 percent) to 9.98 percent (for differentials of 2.5 percent). Over the long-range period, it varies from 13.65 to 11.43 percent.

The average cost rate decreases with increasing real-wage differentials for two reasons. One is that there is a lag between the time when workers pay taxes based on the higher earnings and the time when they draw benefits based on those earnings. The other is that the benefits to those already eligible—benefits which generally increase with the CPI, not wages—are smaller relative to the payrolls based on the higher real-wage differentials.

Because of the relatively constant average total income rate, the actuarial balances vary by amounts similar in magnitude to the changes in the average cost rates, but in the opposite direction. (See the preceding discussion in regard to changes in the CPI assumptions.) The medium-range actuarial balance increases from 1.47 (for real-wage differentials of 1 percent) to 2.50 percent of taxable payroll (for real-wage differentials of 2.5 percent). The long-range actuarial balance increases from -0.74 to 1.37 percent.

APPENDIX C.—DETERMINATION AND ANNOUNCEMENT OF SOCIAL SECURITY BENEFIT INCREASES[1]

I hereby determine and announce a cost-of-living increase of 7.4 percent in benefits under titles II and XVI of the Social Security Act.

Under title II, Old-Age, Survivors, and Disability Insurance benefits will increase by 7.4 percent beginning with the June 1982 benefits which are payable on July 2, 1982. This increase is based on the authority contained in section 215(i) of the Social Security Act (42 U.S.C. 415(i)), as amended by section 201 of Pub. L. 95-216 enacted December 20, 1977.

Under title XVI, supplemental security income payment levels will increase by 7.4 percent effective for payments made on July 1, 1982. This is based on the authority contained in section 1617 of the Social Security Act (42 U.S.C. 1382f).

TITLE II BENEFITS

Title II benefits are payable under the Federal Old-Age, Survivors, and Disability Insurance program. Individuals entitled under this program include insured workers, wives, husbands, children, widows, widowers, mothers, fathers, and parents.

In accordance with section 215(i)(4) of the Social Security Act (the Act), the primary insurance amounts and the maximum family benefits shown in columns IV and V of the revised benefit table (table 1) set forth below were obtained by increasing by 7.4 percent the corresponding amounts established by: (1) The last cost-of-living increase; and (2) the extension of the benefit table made under section 215(i)(4) and published on October 30, 1981 at 46 FR 53791. The table applies only to those persons who attained age 62, became disabled or died before January 1979 and is deemed to appear in section 215(a) of the Act. Note that this table does not apply to those individuals who reach age 62, become disabled, or die after 1978; their benefits will generally be determined by a new benefit formula provided by the Social Security Amendments of 1977 (Pub. L. 95-216). For persons first eligible for benefits in the period 1979-1982, the 7.4 percent increase will apply beginning June 1982; but the 7.4 percent increase will not apply for persons first becoming eligible for benefits after 1982.

Section 215(i)(2)(D) of the Act also requires that, when the Secretary determines a cost-of-living increase in Social Security benefits, the Secretary shall publish in the Federal Register a revision of the range of the primary insurance amounts and corresponding maximum family benefits based on the dollar amount and other provisions described in section 215(a)(1)(C)(i)(II). These benefits are referred to as "special minimum benefits" and are payable to certain individuals with long periods of relatively low earnings. In accordance with section 215(a)(1)(C)(i)(II), the attached table 2 shows the revised range of primary insurance amounts and corresponding maximum family benefit amounts after the 7.4 percent benefit increase.

Section 227 of the Act provides limited benefits to a worker who became age 72 before 1969 and was not insured under the usual requirements, and to his wife or widow. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The current monthly benefit amounts of $117.00 for an individual and $58.70 for a wife established under sections 227 and 228 of the Act are increased by 7.4 percent to obtain the new amounts of $125.60 and $63.00, respectively.

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[1] This statement, edited for presentation here, was published in the Federal Register for May 14, 1982 (Vol. 47, No. 94, pp. 20863-64).

TITLE XVI BENEFITS

Section 1617 of the Act provides that whenever title II benefits are increased under section 215(i), the amounts in sections 1611(a)(1)(A), 1611(a)(2)(A), 1611(b)(1) and 1611(b)(2) of the Act and in section 211(a)(1)(A) of Pub. L. 93-66 shall be increased. The new amounts are effective for months after the month in which the title II increase is effective. The percentage increase is the same as the title II benefit increase and the annual payment amount is rounded, when not a multiple of $1.20, to the next higher multiple of $1.20.

In accordance with section 1617, Federal Supplemental Security Income (SSI) guarantees for the aged, blind, and disabled are increased effective with July 1982 by 7.4 percent. The current yearly Federal SSI guarantees of $3,176.40 for an eligible individual and $4,764.00 for an eligible individual with an eligible spouse are thereby increased to $3,411.60 and $5,116.80, respectively. The monthly payment is determined by dividing the yearly guarantee by 12 and then subtracting the monthly countable income. In the case of an eligible individual with an eligible spouse, the amount payable is further divided equally between the two spouses. The amount by which the Federal SSI guarantee amount is increased because of the presence of an essential person in the home, currently $1,591.20 per year for each essential person under section 211(a)(1)(A) of Pub. L. 93-66, is also increased by 7.4 percent to obtain a new amount of $1,710.00.

AUTOMATIC BENEFIT INCREASE DETERMINATION

Section 215(i) of the Act requires that when certain conditions are met in the first calendar quarter of a year, the Secretary shall determine that a cost-of-living increase in benefits is due. Section 215(i) of the Act also specifies the formula for determining the amount of any cost-of-living increase in benefits. This formula utilizes the Consumer Price Index for urban wage earners and clerical workers reported by the Department of Labor.

Section 215(i)(2)(A) of the Act requires the Secretary to determine each year whether there is a cost-of-living computation quarter in that year. If the Secretary so determines, the Secretary shall, effective with June of that year, increase benefits for individuals entitled under section 227 or 228 of the Act, shall increase the primary insurance amounts of all other individuals entitled under title II of the Act, and shall also increase the maximum benefits payable to a family. Section 1617 of the Act requires that SSI benefits be increased by the same percentage increase as title II benefits, whenever title II benefits are increased under section 215(i). The percentage increase is equal to the percentage increase in the Consumer Price Index for the cost-of-living computation quarter over the index for the most recent cost-of-living computation quarter.

Section 215(i)(1) of the Act defines a base quarter as a calendar quarter ending on March 31 in each year after 1974, or any other calendar quarter in which occurs the effective month of a general benefit increase. Section 215(i)(1) also defines a cost-of-living computation quarter as a base quarter in which the Consumer Price Index prepared by the Department of Labor exceeds by not less than 3 percent the index in the later of (1) the last prior cost-of-living computation quarter or (2) the most recent calendar quarter in which a general benefit increase was effective. However, there shall be no cost-of-living computation quarter in any calendar year if in the prior year a general benefit increase was enacted or became effective. Section 215(i)(1) of the Act also provides that the Consumer Price Index for a cost-of-living computation quarter shall be the arithmetical mean of this index for the 3 months in that quarter.

The Department of Labor's revised Consumer Price Index for urban wage earners and clerical workers for each month in the quarter ending March 31, 1981 was: For January 1981, 260.7; for February 1981, 263.5; and for March 1981, 265.2. The arithmetical mean for this calendar quarter is 263.1. The corresponding Consumer Price Index for each month in the quarter ending March 31, 1982 was: For January 1982, 282.1; for February 1982, 282.9; and for March 1982, 282.5. The arithmetical mean for this calendar quarter is 282.5. The increase for the calendar quarter ending March 31, 1982 is 7.4 percent. Thus, since the percentage of increase in the Consumer Price Index from the calendar quarter ending March 31, 1981 to the calendar quarter ending March 31, 1982 is not less than 3 percent, the quarter ending March 31, 1982 is a cost-of-living computation quarter. Consequently, a cost-of-living benefit increase of 7.4 percent is effective for benefits under title II of the Act beginning June 1982.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802-5, and 13.807 Social Security Programs)

Dated: May 10, 1982.

Richard S. Schweiker,
Secretary of Health and Human Services

(The revised tables of benefits which were published at the end of the above announcement in the Federal Register are not reproduced here because of their length.)

APPENDIX D.—DETERMINATION AND ANNOUNCEMENT OF AVERAGE OF TOTAL WAGES FOR 1981 AND CONTRIBUTION AND BENEFIT BASE, QUARTER OF COVERAGE AMOUNT, RETIREMENT TEST EXEMPT AMOUNTS, FORMULAS FOR COMPUTING BENEFITS, AND EXTENDED TABLE OF BENEFIT AMOUNTS FOR 1983[1]

Summary

The Secretary has determined—

(1) The average of the total wages for 1981 to be $13,773.10;

(2) The Social Security contribution and benefit base to be $35,700 for remuneration paid in 1983 and self-employment income earned in taxable years beginning in 1983;

(3) The amount of earnings a person must have to be credited with a quarter of coverage in 1983 to be $370; and

(4) The monthly exempt amount under the Social Security retirement test for taxable years ending in calendar year 1983 to be $550 for beneficiaries age 65 and over and $410 for beneficiaries under age 65.

The formulas we use to compute the benefits for a worker and his or her family who first become eligible for benefits in 1983 are also described below.

Finally, a table reflecting the new higher average monthly wage and related benefit amounts made possible by the higher contribution and benefit base is also published. The table will be used primarily to compute the retirement benefits of workers who reached age 62 before 1979.

Supplementary information:

Sections 203(f)(8), 213(d) and 230(a) of the Social Security Act (42 U.S.C. 403(f)(8), 413(d) and 430(a)) require the Secretary of Health and Human Services to publish in the Federal Register on or before November 1, 1982, the contribution and benefit base, the amount of earnings required for a quarter of coverage, and the retirement test exempt amounts, for calendar year 1983. In addition, section 215(a)(1)(D) requires that the Secretary publish by November 1, 1982 the formula for computing a primary insurance amount for workers who first become eligible for benefits or die in 1983, and section 203(a)(2)(C) requires that the Secretary publish by November 1, 1982 the formula for computing a family's maximum benefits for families of workers who first become eligible for old-age benefits or die in 1983.

AVERAGE OF THE TOTAL WAGES FOR 1981

The determination of the average wage figure for 1981 is based on the 1980 average wage figure of $12,513.46 announced in the Federal Register on October 30, 1981 (46 FR 53791) along with the percentage increase in average wages from 1980 to 1981 measured by annual wage data tabulated by the Internal Revenue Service (IRS). The average amounts of wages calculated directly from IRS data were $12,850.89 and $14,144.50 for 1980 and 1981, respectively. To determine an average wage figure for 1981 at a level that is consistent with the series of average wages for 1951-1977 (published December 29, 1978 at 43 FR

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[1] This statement, edited for presentation here, was published in the Federal Register for November 10, 1982 (Vol. 47, No. 218, pp. 51003-06).

61016), we multiplied the 1980 average wage figure of $12,513.46 by the percentage increase in average wages from 1980 to 1981 (based on IRS data) as follows (with the result rounded to the nearest cent):

Average wage for 1981 = $12,513.46 x $14,144.50/$12,850.89 = $13,773.10.

Therefore, the average wage for 1981 is determined to be $13,773.10.

CONTRIBUTION AND BENEFIT BASE

General.

The 1983 contribution and benefit base is $35,700.

The contribution and benefit base serves two purposes:

(1) It is the maximum annual amount of earnings on which Social Security taxes are paid.

(2) It is the maximum annual amount used in figuring a person's Social Security benefits.

Computation.

Section 230(c) of the Social Security Act provides a table with the contribution and benefit base for each year 1978, 1979, 1980, and 1981. For years after 1981, section 230(b) of the Social Security Act contains a formula for determining the contribution and benefit base. Under the prescribed formula, the contribution and benefit base for 1983 shall be equal to the 1982 base of $32,400 multiplied by the ratio of (1) the average amount, per employee, of total wages for the calendar year 1981 to (2) the average amount of those wages for the calendar year 1980. Section 230(b) further provides that if the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Average wages.

The average wage for calendar year 1980 was previously determined to be $12,513.46. The average wage for calendar year 1981 has been determined to be $13,773.10, as stated herein.

Amount.

The ratio of the average wage for 1981, $13,773.10, compared to that for 1980, $12,513.46, is 1.1006628. Multiplying the 1982 contribution and benefit base of $32,400 by the ratio 1.1006628 produces the amount of $35,661.47 which must then be rounded to $35,700. Accordingly, the contribution and benefit base for 1983 is $35,700.

QUARTER OF COVERAGE AMOUNT

General.

The 1983 amount of earnings required for a quarter of coverage is $370. A quarter of coverage is the basic unit for determining whether a worker is insured under the Social Security program. For years before 1978, an individual generally was credited with a quarter of coverage for each quarter in which wages of $50 or more were paid, or for which $100 or more of self-employment income were credited, to the individual. Beginning in 1978, wages generally are no longer reported on a quarterly basis; instead, annual reports are made. With the change to annual reporting, section 352(b) of the Social Security Amendments of

1977 (Pub. L. 95-216) amended section 213(d) of the Social Security Act to provide that a quarter of coverage would be credited for each $250 of an individual's total wages and self-employment income for calendar year 1978 (up to a maximum of 4 quarters of coverage for the year). Section 213(d) also provides that this amount shall be redetermined each year and any change published in the Federal Register no later than November 1 of the year preceding the year for which the change is effective.

Computation.

Under the prescribed formula, the quarter of coverage amount for 1983 shall be equal to the 1978 amount of $250 multiplied by the ratio of (1) the average amount, per employee, of total wages for calendar year 1981 to (2) the average amount of those wages reported for calendar year 1976. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average wages.

The average wage for calendar year 1976 was previously determined to be $9,226.48. This was published in the Federal Register on December 29, 1978, at 43 FR 61016. The average wage for calendar year 1981 has been determined to be $13,773.10 as stated herein.

Quarter of coverage amount.

The ratio of the average wage for 1981, $13,773.10, compared to that for 1976, $9,226.48, is 1.492779. Multiplying the 1978 quarter of coverage amount of $250 by the ratio of 1.492779 produces the amount of $373.19 which must then be rounded to $370. Accordingly, the quarter of coverage amount for 1983 is $370.

RETIREMENT TEST EXEMPT AMOUNTS

(a) Beneficiaries aged 70 or over.

Beginning with months after December 1982, there is no limit on the amount an individual aged 70 or over may earn and still receive Social Security benefits. The age at which the retirement test ceases to apply is reduced from age 72 to age 70 by Pub. L. 97-35, which amended section 203(c)(1) of the Social Security Act.

(b) Beneficiaries aged 65 through 69.

The retirement test monthly exempt amount for beneficiaries over age 65 is stated in the Social Security Act at section 203(f)(8)(D) for years 1978 through 1982. The stated monthly exempt amount for 1982 is $500. A formula is provided in section 203(f)(8)(B) for computing the exempt amount applicable for years after 1982. Under the formula, the exempt amount for 1983 shall be the 1982 exempt amount multiplied by the ratio of (1) the average amount, per employee, of the total wages for calendar year 1981 to (2) the average amount of those wages for calendar year 1980. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average wages. Average wages for this purpose are determined in the same way as for the contribution and benefit base. Therefore, the ratio of the average wages for 1981, $13,773.10 compared to that for 1980, $12,513.46, is 1.1006628.

Exempt amount for beneficiaries aged 65 through 69. Multiplying the 1982 retirement test monthly exempt amount of $500 by the ratio of 1.1006628 produces the amount of $550.33. This must then be rounded to $550. The retirement test monthly exempt amount for beneficiaries ages 65 through 69 is determined to be $550 for 1983. The corresponding annual retirement test exempt amount for these beneficiaries is $6,600.

(c) Beneficiaries under age 65.

Section 203 of the Social Security Act provides that beneficiaries aged 65 and over have a higher retirement test monthly exempt amount than those beneficiaries under age 65. The exempt amount for beneficiaries under age 65 is determined by a formula provided in section 203(f)(8)(B) of the Social Security Act. Under the formula, the monthly exempt amount for beneficiaries under age 65 is $370 for 1982. The formula provides that the exempt amount for 1983 shall be the 1982 exempt amount for beneficiaries under age 65 multiplied by the ratio of (1) the average amount, per employee, of the total wages for calendar year 1981 to (2) the average amount of those wages for calendar year 1980. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average wages. Average wages for this purpose are determined in the same way as for the contribution and benefit base. Therefore, the ratio of the average wages for 1981, $13,773.10 compared to that of 1980, $12,513.46 is 1.1006628.

Exempt amount for beneficiaries under age 65. Multiplying the 1982 retirement test monthly exempt amount of $370 by the ratio 1.1006628 produces the amount of $407.25. This must then be rounded to $410. The retirement test monthly exempt amount for beneficiaries under age 65 is determined to be $410 for 1983. The corresponding annual retirement test exempt amount for these beneficiaries is $4,920.

COMPUTING BENEFITS AFTER 1978

The Social Security Amendments of 1977 changed the formula for determining an individual's primary insurance amount after 1978. This basic new formula is based on "wage indexing" and was fully explained with interim regulations published in the Federal Register on December 29, 1978 at 43 FR 60877. It generally applies when a worker after 1978 attains age 62, becomes disabled, or dies before age 62. This formula uses the worker's earnings after they have been adjusted, or "indexed," in proportion to the increase in average wages of all workers. Using this method, we determine the worker's "average indexed monthly earnings." We then compute the primary insurance amount, using the worker's "average indexed monthly earnings" and also adjust the computation formula to reflect changes in general wage levels.

Average indexed monthly earnings.

To assure that a worker's future benefits reflect the general rise in the standard of living that occurs during their working lifetime, we adjust or "index" the worker's past earnings to take into account the change in general wage levels that has occurred during the worker's years of employment. These adjusted earnings are then used to compute the worker's primary insurance amount.

For example, to compute the average indexed monthly earnings for a worker attaining age 62, becoming disabled, or dying before attaining age 62, in 1983, we divide the average of the total wages for 1981, $13,773.10, by the average of the total wages for each year prior to 1981 in which the worker had earnings. We then multiply the actual wages and self-employment income credited for those years by this ratio to obtain the worker's adjusted earnings for that year. After determining the number of years we must use to compute the primary insurance amount, we pick those years with highest indexed earnings, total those indexed earnings and divide by the total number of months in those years. This figure is rounded down to the next lower dollar amount, and becomes the average indexed monthly earnings figure to be used in computing the worker's primary insurance amount for 1983.

Computing the primary insurance amount.

The primary insurance amount is the sum of three separate percentages of portions of the average indexed monthly earnings. In 1979 (the first year the formula was in effect), these portions were the first $180, the amount between $180 and $1,085, and the amount over $1,085. The amounts for 1983 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1981, $13,773.10, and for 1977, $9,779.44. These results are then rounded to the nearest dollar. For 1983 the ratio is 1.408373. Multiplying the 1979 amounts of $180 and $1,085 by 1.408373 produces the amounts of $253.51 and $1,528.08. These must then be rounded to $254 and $1,528. Accordingly, the portions of the average indexed monthly earnings to be used in 1983 are determined to be the first $254, the amount between $254 and $1,528, and the amount over $1,528.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1983 or who die in 1983 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

(a) 90 percent of the first $254 of their average indexed monthly earnings, plus

(b) 32 percent of the average indexed monthly earnings over $254 and through $1,528, plus

(c) 15 percent of the average indexed monthly earnings over $1,528.

This amount is then rounded to the next lower multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have described are contained in section 215(a) of the Social Security Act (42 U.S.C. 415(a)) as amended by Public Law 97-35.

MAXIMUM BENEFITS PAYABLE TO A FAMILY

The 1977 Amendments continued the long established policy of limiting the total monthly benefits which a worker's family may receive based on his or her primary insurance amount. Those amendments also continued the then existing relationship between maximum family benefits and primary insurance amounts but did change the method of computing the maximum amount of benefits which may be paid to a worker's family. The 1980 Amendments (Pub. L. 96-265) established a new formula for computing the maximum benefits payable to the family of a disabled worker. This new formula is applied to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980 and who first become eligible for these benefits after 1978. The new formula was explained in a Final Rule published in the Federal Register on May 8, 1981 at 46 FR 25601. For disabled workers initially entitled to disability benefits before July 1980, or whose disability began before 1979, the family maximum payable is computed the same as the old-age and survivor family maximum.

Computing the old-age and survivor family maximum.

The formula used to compute the family maximum is similar to that used to compute the primary insurance amount. It involves computing the sum of four separate percentages of portions of the worker's primary insurance amount. In 1979, these portions were the first $230, the amount between $230 and $332, the amount between $332 and $433, and the amount over $433. The amounts for 1983 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1981, $13,773.10, and the average for 1977, $9,779.44. This amount is then rounded to the nearest dollar. For 1983, the ratio is 1.408373. Multiplying the amounts of $230, $332, and $433 by 1.408373 produces the amounts of $323.93, $467.58, and $609.83. These amounts are then rounded to $324, $468, and $610. Accordingly, the portions of the primary insurance amounts to be used in 1983 are determined to be the first $324, the amount between $324 and $468, the amount between $468 and $610, and the amount over $610.

Consequently, for the family of a worker who becomes age 62 or dies in 1983, the total amount of benefits payable to them will be computed so that it does not exceed:

(a) 150 percent of the first $324 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $324[1] through $468, plus

(c) 134 percent of the worker's primary insurance amount over $468 through $610, plus

(d) 175 percent of the worker's primary insurance amount over $610.

This amount is then rounded to the next lower multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have described are contained in section 203(a) of the Social Security Act (42 U.S.C. 403(a)) as amended by Public Law 97-35.

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[1] In the Federal Register announcement, this amount was misprinted as $234.

EXTENSION OF BENEFIT TABLE EFFECTIVE JANUARY 1983

The following is an extension of the Table for Determining Primary Insurance Amount and Maximum Family Benefits provided in section 215(a)(5) of the Social Security Act. This extension reflects the higher average monthly wage and related benefit amounts now possible under the increased contribution and benefit base published by this Notice effective January 1983 in accordance with section 215(i) of the Social Security Act. The extended portion of the benefit table shown here will apply primarily to benefits based on earnings of workers who reached age 62 before 1979.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802-13.805, and 13.807 Social Security Programs)

Dated: November 4, 1982.

Richard S. Schweiker,
Secretary of Health and Human Services

(The extended benefit table which was published at the end of the above announcement in the Federal Register is not reproduced here because of its length.)

APPENDIX E.—AUTOMATIC ADJUSTMENTS UNDER OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE

The Social Security Act specifies that certain program amounts affecting the determination of OASDI benefits are to be adjusted annually to reflect changes in the general economy. Specific formulas are prescribed by the law which, when applied to reported statistics, produce "automatic" revisions in these program amounts and hence in the benefit computation procedures.

In this appendix, values are shown for the program amounts which are subject to automatic adjustment from the time that such adjustments became effective through 1983. Projected values for future years through 1988, based on the two intermediate sets of assumptions (alternatives II-A and II-B), are also shown. These assumptions are described in the section of this report entitled "Economic and Demographic Assumptions" and are shown in tables 10 and 11. The section entitled "Automatic Adjustments," and Appendices C and D, provide a more complete description of the program amounts affected by the automatic adjustment procedures.

Under section 215(b)(3) of the Social Security Act, the average amount of total wages for each year after 1950 is used to index the earnings of most workers newly eligible for benefits in 1979 or later. This procedure converts a worker's past earnings to approximately their equivalent values near the time of the worker's retirement or other eligibility, and these values are used to calculate the worker's Average Indexed Monthly Earnings (AIME). The average amount of total wages for each year is also used to adjust most of the program amounts that are subject to the automatic provisions. The announcement of the average wage determination for 1981, including a brief description of its derivation, is shown in Appendix D. Appendix D also describes the determinations of other program amounts that are in effect for 1983. Table E1 shows the average amount of total wages as announced for 1951 through 1981, together with projected values for 1982 through 1988 based on the two intermediate sets of assumptions.

TABLE E1.—AVERAGE AMOUNT OF TOTAL WAGES FOR 1951-81 AND PROJECTED FUTURE AMOUNTS FOR 1982-88, UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Actual amounts
1951	$2,799.16
1952	2,973.32
1953	3,139.44
1954	3,155.64
1955	3,301.44
1956	3,532.36
1957	3,641.72
1958	3,673.80
1959	3,855.80
1960	4,007.12
1961	4,086.76
1962	4,291.40
1963	4,396.64
1964	4,576.32
1965	4,658.72
1966	4,938.36
1967	5,213.44
1968	5,571.76
1969	5,893.76
1970	6,186.24
1971	6,497.08
1972	7,133.80
1973	7,580.16
1974	8,030.76
1975	8,630.92
1976	9,226.48
1977	9,779.44
1978	10,556.03
1979	11,479.46
1980	12,513.46
1981	13,773.10

Calendar year	Projected future amounts by alternative—	
	II-A	II-B
1982	$14,496.18	$14,496.18
1983	15,134.15	15,166.21
1984	15,760.63	15,741.45
1985	16,519.41	16,596.15
1986	17,358.42	17,527.25
1987	18,257.93	18,520.90
1988	19,160.56	19,524.63

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in table 10.

The provisions for automatic cost-of-living increases in OASDI benefits were enacted in 1972 and first became effective with the benefit increase for June 1975. The notice announcing the June 1982 benefit increase is shown in Appendix C. As a result of the Social Security Amendments of 1983, automatic benefit increases projected for 1983 and later will be effective for December of each year. Table E2 shows the automatic benefit increases determined for each year 1975-83 and the benefit increases for each year 1984-88 on the basis of the two intermediate sets of assumptions.

TABLE E2.—BENEFIT INCREASE AND OTHER OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC PROVISIONS FOR 1975-83 AND PROJECTED FUTURE AMOUNTS FOR 1984-88, UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Benefit increase[1] (percent)	Contribution and benefit base	"Old-law" contribution and benefit base[2]	Retirement test exempt amount		Amount of earnings required for quarter of coverage[4]	AIME "bend points" in PIA formula		PIA "bend points" in maximum family benefit formula		
				Under age 65	Age 65 and over[3]		First	Second	First	Second	Third
Actual experience:											
1975	8.0	$14,100	(5)	$2,520	$2,520	(5)	(5)	(5)	(5)	(5)	(5)
1976	6.4	15,300	(5)	2,760	2,760	(5)	(5)	(5)	(5)	(5)	(5)
1977	5.9	16,500	(5)	3,000	3,000	(5)	(5)	(5)	(5)	(5)	(5)
1978	6.5	17,700	(5)	3,240	[7]4,000	[8]$250	(5)	(5)	(5)	(5)	(5)
1979	9.9	[7]22,900	$18,900	3,480	[7]4,500	260	[8]$180	[8]$1,085	[8]$230	[8]$332	[8]$433
1980	14.3	[7]25,900	20,400	3,720	[7]5,000	290	194	1,171	248	358	467
1981	11.2	[7]29,700	22,200	4,080	[7]5,500	310	211	1,274	270	390	508
1982	7.4	32,400	24,300	4,440	[7]6,000	340	230	1,388	294	425	554
1983	3.5	35,700	26,700	4,920	6,600	370	254	1,528	324	468	610
Projected future experience:											
Alternative II-A:											
1984	3.7	37,500	28,200	5,160	6,960	390	267	1,609	341	492	642
1985	4.0	39,000	29,400	5,400	7,320	410	279	1,679	356	514	670
1986	3.5	40,500	30,600	5,640	7,680	430	290	1,749	371	535	698
1987	3.2	42,300	32,100	5,880	8,040	450	304	1,833	389	561	731
1988	3.0	44,400	33,600	6,120	8,400	470	319	1,926	408	589	769
Alternative II-B:											
1984	4.6	37,500	28,200	5,160	6,960	390	267	1,609	341	492	642
1985	5.3	39,300	29,400	5,400	7,320	410	279	1,683	357	515	672
1986	4.7	40,800	30,600	5,640	7,560	430	290	1,746	370	534	697
1987	4.4	42,900	32,400	6,000	7,920	450	305	1,841	390	563	735
1988	4.1	45,300	34,200	6,360	8,400	470	323	1,945	412	595	776

[1] Effective with benefits payable for June in each year 1975-82, and for December in each year after 1982.

[2] Contribution and benefit base that would have been determined automatically under the law in effect prior to the Social Security Amendments of 1977.

[3] In 1955-82, retirement earnings test did not apply at ages 72 and over; beginning in 1983, it does not apply at ages 70 and over.

[4] See Appendix D for a description of quarter-of-coverage requirements prior to 1978.

[5] No provision in law for this amount in this year.

[6] Amount not subject to automatic provisions in this year.

[7] Amount specified by Social Security Amendments of 1977.

[8] Amount specified for first year by Social Security Amendments of 1977; amounts for subsequent years subject to automatic provisions.

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in table 10.

The law provides for an automatic increase in the contribution and benefit base for the year following a year in which an automatic benefit increase became effective. The base for 1975 was the first one determined on this basis. (Amendments enacted in December 1973 provided that the 11-percent general benefit increase that became effective in 1974 would be considered an automatic cost-of-living benefit increase for purposes of the automatic provisions.) The bases for 1979-81 were specified by the 1977 amendments at levels above those which were expected to occur under the automatic provisions (and which, in fact, as the experience developed, were above such levels). Starting again in 1982, the bases are determined automatically on the basis of increases in average wages. Table E2 shows past and projected future amounts for the contribution and benefit base.

As described in the section "Automatic Adjustments," the Social Security Act also provides for the determination of the contribution and benefit base that would have been in effect in each year after 1978 under the law as in effect prior to the enactment of the 1977 amendments. Table E2 presents such amounts as determined for 1979-83, together with projections for 1984-88 under the two intermediate sets of assumptions.

The 1972 amendments also specified that the amount of earnings exempted from the withholding of benefits under the retirement earnings test would increase automatically in the year following a year in which an automatic cost-of-living benefit increase became effective. The 1977 amendments modified this procedure by establishing different exempt amounts for those under age 65 and for those aged 65 and over. The former amounts continue to increase automatically, while the latter amounts were specified for 1978-82, after which they again increase automatically. The announcement of the exempt amounts for 1983 is shown in Appendix D, and table E2 shows the amounts for 1975-88.

The 1977 amendments specified the amount of earnings to be used in 1978 to credit a "quarter of coverage" and provided for automatic adjustment of this amount for future years. Appendix D describes the determination of the amount for 1983, and table E2 shows the amounts for 1978-88.

As mentioned previously, the 1977 amendments substantially revised the method of computing benefits for most workers first becoming eligible for benefits in 1979 and later. The formula used to compute the Primary Insurance Amount (PIA) for a worker newly eligible in 1979 is:

90 percent of the first $180 of AIME, plus
32 percent of AIME in excess of $180
but not in excess of $1,085, plus
15 percent of AIME in excess of $1,085.

The amounts separating the individual's AIME into intervals—the "bend points"—are adjusted automatically by the changes in average wages as specified in section 215(a)(1)(B) of the Social Security Act. (A minimum benefit of $122 and a "special minimum benefit" varying by "years of coverage" are also provided, although for most workers first becoming eligible for benefits in 1982 and later, the regular minimum benefit of $122 has been eliminated.) The determination of the bend points for the 1983 PIA formula is described in Appendix D. The bend points for 1979-83, and the amounts projected for 1984-88, are shown in table E2.

A similar formula is used to compute the maximum amount of total monthly benefits payable on the basis of the earnings of a retired or deceased individual. This formula is a function of the individual's PIA, and is shown below for persons newly eligible in 1979:

150 percent of the first $230 of PIA, plus
272 percent of the PIA in excess of $230
but not in excess of $332, plus
134 percent of the PIA in excess of $332
but not in excess of $433, plus
175 percent of the PIA in excess of $433.

These PIA-interval bend points are adjusted automatically in accordance with section 203(a)(2). Appendix D contains the announcement of the 1983 family maximum formula bend points, and the amounts for 1975-88 are shown in table E2.

APPENDIX F.—ACTUARIAL COST PROJECTIONS OF THE OASI, DI, AND HI PROGRAMS, COMBINED

In this appendix, cost projections for the OASI, DI, and Hospital Insurance Trust Funds are summarized to facilitate analysis of the adequacy of the combined income and assets of these three trust funds relative to their combined expenditures. These projections represent the combination of projections shown in this report and in the similar report for the HI Trust Fund.

Public Law 97-123 granted limited authority for borrowing among the OASI, DI, and HI Trust Funds; this authority expired on December 31, 1982. As described earlier in this report, the Social Security Amendments of 1983 reauthorized interfund borrowing through the end of 1987. In addition, the current provisions of the law (1) prohibit new loans from a trust fund if the fund's assets are below specified levels and (2) set forth minimum standards for the repayment of interfund loans (including a requirement for the complete repayment of all such loans before 1990). Throughout this report and the concurrent HI Annual Report, the effects of these new provisions are included in the estimated trust fund operations. The projections shown in this appendix for the combined trust funds are theoretical after 1987 since, under present law, no authority exists beyond 1987 for transferring assets from one trust fund to another except to repay prior loans. Thus the emphasis in this appendix on combined operations should not obscure the financial status of the individual trust funds.

Table F1 shows estimated assets of the combined funds as a percentage of combined annual expenditures for calendar years 1983-92, based on the four alternative sets of assumptions used in this report. Under all four alternative sets of assumptions used in this report and the concurrent HI Annual Report, it is estimated that no further interfund loans would be necessary during 1983-87. In addition, the estimates indicate that all loans made to the OASI Trust Fund in calendar year 1982 could be repaid before the deadline established in the law. In tables 12-14 of this report, estimated amounts of repayments under each set of alternative assumptions are shown through 1987 (projections in that part of the report are presented for 1983-87 only). The estimates extended through 1992 indicate that, except under alternative III, the total loan of $12.4 billion made from the HI Trust Fund to the OASI Trust Fund in calendar year 1982 could be repaid by the end of 1988 using the minimum standard in the law for repayment of such loans. Under alternative III, the minimum standard would need to be exceeded to ensure the repayment of funds owed to HI before that fund would be depleted in 1988. Under alternative I, the $5.1 billion loan from the DI Trust Fund to the OASI Trust Fund is assumed to be repaid in 1988. Under the other three alternatives, the loan from DI is assumed to be repaid in 1989.

As shown in table F1, under alternatives I, II-A, and II-B the assets of the OASI and DI Trust Funds would grow as a percentage of outgo throughout the period shown. Under alternative III, significant growth would not occur until 1988 and later. Under alternative I, assets of the HI Trust Fund would grow through about 1987, relative to HI expenditures, before beginning to decline. Under the remaining alternative sets of assumptions, the assets of the HI Trust Fund are projected to begin declining in 1984, leading to exhaustion of the trust fund in 1991, 1990, and 1988 under alternatives II-A, II-B, and III, respectively. Table F1 indicates that the combined assets of the OASI, DI, and HI Trust Funds would be sufficient to meet their combined obligations through the end of 1992, under the four alternatives. In particular, this suggests that a reallocation of tax rates among the OASI, DI, and HI programs, or the extension of authority for interfund borrowing beyond 1987, could be sufficient to prevent the HI Trust Fund's short-range financing problems, at least through 1992. Under adverse economic conditions, however, such as those assumed in alternative III, the margin for safety would be small during this period.

TABLE F1.—PROJECTED ASSETS[1] OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FOUR ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1983-92

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative I:					
1983	15	15	15	20	18
1984	21	38	22	26	23
1985	22	35	23	25	23
1986	26	35	27	27	27
1987	28	40	29	46	33
1988	37	50	38	48	40
1989	53	94	57	47	54
1990	73	113	77	45	69
1991	99	152	104	42	89
1992	126	188	131	37	108
Alternative II-A:					
1983	15	15	15	20	18
1984	20	38	22	25	23
1985	21	33	22	22	22
1986	24	31	25	20	23
1987	25	32	25	27	26
1988	26	36	27	34	29
1989	39	48	40	27	36
1990	51	84	54	17	45
1991	69	109	72	5	56
1992	88	135	92	(*)	66
Alternative II-B:					
1983	15	15	15	20	18
1984	20	38	22	25	23
1985	20	32	21	21	21
1986	22	29	23	18	22
1987	23	28	23	18	22
1988	23	30	24	18	23
1989	28	38	29	21	27
1990	35	69	38	9	31
1991	47	89	51	(*)	37
1992	59	111	64	(*)	42

TABLE F1.—PROJECTED ASSETS[1] OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FOUR ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1983-92 (Cont.)

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative III:					
1983	15	15	15	20	16
1984	19	37	21	24	22
1985	17	29	18	17	18
1986	18	25	19	9	17
1987	21	24	21	3	17
1988	18	24	19	8	16
1989	26	30	27	([2])	18
1990	34	56	36	([2])	19
1991	42	70	45	([2])	20
1992	48	83	51	([2])	17

[1] Beginning in 1984, assets of the OASI and DI Trust Funds, but not of the HI Trust Fund, include advance tax transfers for January. Assets are defined slightly differently for the OASDI and HI programs because of their different cash flows. These differences do not affect the interpretation of the estimates shown in this table.

[2] Assets are projected to be negative, and are projected not to recover before the end of the long-range projection period.

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" of this report and in Appendix A of the HI Annual Report. The combined OASDI and HI Trust Fund ratios are theoretical in years after the HI Trust Fund is depleted. See text for further details and estimated depletion years for the HI Trust Fund under the alternative sets of assumptions.

Table F2 shows projected cost rates for the OASI, DI, and HI programs during the period 1983-2007 under alternatives II-A and II-B. This table also shows a comparison of total cost rates and total income rates for the three trust funds combined. As previously discussed, cost rates represent program expenditures as a percentage of effective taxable payroll. The total income rate represents the employee-employer tax rate for the combined OASI, DI, and HI Trust Funds plus the OASDI income rate attributable to income from the taxation of OASDI benefits, as described earlier in this report. The definition of effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to the different coverage provisions for Federal civilian workers under the two programs. This difference does not materially affect the comparisons. It should also be noted that the cost rates shown exclude any cost associated with rebuilding the HI Trust Fund to a level suitable as a contingency reserve, or the cost of maintaining such a level once reached. Table 8 of the HI Annual Report presents these additional costs.

TABLE F2.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS, UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2007

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate				Total income rate	Balance[2]
	OASI	DI	HI[3]	Total		
Alternative II-A:						
1983	10.28	1.21	[4]2.70	14.19	13.97	-0.22
1984	10.24	1.13	2.75	14.13	14.17	.04
1985	10.15	1.08	2.85	14.09	14.28	.19
1986	10.16	1.05	2.95	14.15	14.50	.35
1987	10.08	1.02	3.04	14.14	14.52	.38
1988	9.98	.99	3.15	14.13	15.26	1.14
1989	9.84	.97	3.24	14.05	15.28	1.23
1990	9.74	.97	3.36	14.06	15.59	1.53
1991	9.64	.96	3.48	14.08	15.62	1.53
1992	9.55	.96	3.59	14.10	15.65	1.55
1993	9.34	.95	3.70	13.99	15.66	1.67
1994	9.18	.94	3.81	13.93	15.66	1.73
1995	9.03	.93	3.93	13.88	15.67	1.78
1996	8.87	.92	4.03	13.83	15.66	1.84
1997	8.73	.92	4.13	13.77	15.66	1.89

TABLE F2.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS, UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2007 (Cont.)

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate				Total income rate	Balance[3]
	OASI	DI	HI[2]	Total		
Alternative II-A: (Cont.)						
1998	8.60	.93	4.22	13.76	15.66	1.90
1999	8.47	.95	4.31	13.74	15.66	1.92
2000	8.35	.97	4.40	13.72	15.66	1.93
2001	8.25	1.00	4.50	13.74	15.66	1.91
2002	8.17	1.02	4.59	13.78	15.66	1.87
2003	8.11	1.06	4.68	13.85	15.66	1.81
2004	8.06	1.09	4.78	13.93	15.66	1.73
2005	8.02	1.13	4.88	14.03	15.66	1.63
2006	8.02	1.16	4.99	14.17	15.66	1.49
2007	8.04	1.20	5.11	14.35	15.67	1.32
25-year average: 1983-2007	9.08	1.02	3.89	13.98	15.35	1.37
Alternative II-B:						
1983	10.28	1.21	[4]2.70	14.19	13.97	-.22
1984	10.30	1.14	2.77	14.22	14.17	-.05
1985	10.24	1.09	2.88	14.22	14.28	.07
1986	10.34	1.07	2.99	14.40	14.50	.11
1987	10.35	1.04	3.10	14.49	14.53	.04
1988	10.35	1.02	3.22	14.60	15.27	.68
1989	10.29	1.01	3.33	14.84	15.30	.46
1990	10.26	1.01	3.46	14.73	15.61	.88
1991	10.18	1.00	3.57	14.76	15.64	.88
1992	10.10	1.00	3.68	14.77	15.67	.90
1993	9.94	.99	3.80	14.72	15.68	.96
1994	9.81	.98	3.92	14.71	15.69	.97
1995	9.68	.97	4.05	14.70	15.69	.99
1996	9.54	.97	4.17	14.67	15.69	1.02
1997	9.40	.96	4.27	14.64	15.69	1.05
1998	9.29	.98	4.38	14.65	15.69	1.04
1999	9.17	1.00	4.48	14.65	15.68	1.04
2000	9.06	1.02	4.58	14.66	15.68	1.03
2001	8.96	1.05	4.69	14.70	15.68	.99
2002	8.88	1.07	4.79	14.75	15.68	.94
2003	8.81	1.11	4.90	14.82	15.69	.86
2004	8.75	1.14	5.01	14.91	15.69	.78
2005	8.72	1.18	5.13	15.03	15.69	.66
2006	8.71	1.22	5.25	15.18	15.69	.52
2007	8.73	1.26	5.39	15.37	15.70	.33
25-year average: 1983-2007	9.61	1.06	4.02	14.69	15.37	.68

[1] Effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to different coverage provisions for Federal civilian employees under the respective programs. The difference does not materially affect the comparison.

[2] Cost rates exclude amounts required for trust fund building and maintenance.

[3] The balance is the total income rate minus the OASDHI cost rate. Positive balances are surpluses, and negative balances are deficits.

[4] Differs from the corresponding figure in the 1983 HI Annual Report as a result of an adjustment to treat the 1983 lump-sum transfer for deemed military service wage credits on a consistent basis with the OASDI estimates.

The pattern of projected OASI and DI cost rates for the balance of this century has already been discussed in this report. The HI costs as a percentage of taxable payroll are projected to continue increasing throughout this period under both alternatives II-A and II-B, for reasons described in the HI Annual Report. Under alternative II-A, total OASDI and HI costs would remain at roughly their current level of about 14.19 percent of taxable payroll, through this decade, and would then decline slightly, reaching 13.72 percent in the year 2000, before rising to 14.35 percent in the year 2007. Under alternative II-B, combined cost rates would increase gradually in 1983-92, decline slightly for several years, and then continue increasing, reaching 15.37 percent in the year 2007.

Under both alternatives, total cost rates for OASDI and HI combined would be less than the combined total income rates after 1984. On average, over the 25-year period, total OASDHI income would exceed total OASDHI costs by 1.37 percent and 0.68 percent of taxable payroll, respectively, under alternatives II-A and II-B.

Table F3 presents corresponding cost and income rate comparisons under alternative II-B for the next 75 years, along with averages for the three 25-year periods comprising the long-range projection period.

TABLE F3.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVE II-B, CALENDAR YEARS 1983-2057

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate				Total income rate	Balance[3]
	OASI	DI	HI[2]	Total		
1983	10.28	1.21	[4]2.70	14.19	13.97	-0.22
1985	10.24	1.09	2.88	14.22	14.28	.07
1990	10.26	1.01	3.46	14.73	15.61	.88
1995	9.68	.97	4.05	14.70	15.69	.99
2000	9.06	1.02	4.58	14.66	15.68	1.03
2005	8.72	1.18	5.13	15.03	15.69	.66
2010	8.95	1.37	5.61	15.92	15.72	-.20
2015	9.93	1.49	6.22	17.65	15.78	-1.87
2020	11.21	1.55	7.00	19.77	15.86	-3.91
2025	12.40	1.56	7.89	21.85	15.92	-5.92
2030	13.22	1.51	8.65	23.38	15.98	-7.40
2035	13.62	1.53	9.10	24.26	16.02	-8.24
2040	13.60	1.57	9.29	24.47	16.04	-8.43
2045	13.56	1.61	9.32	24.49	16.06	-8.43
2050	13.66	1.61	9.35	24.62	16.06	-8.55
2055	13.79	1.60	9.37	24.77	16.07	-8.69
25-year averages:						
1983-2007	9.61	1.06	4.02	14.69	15.37	.68
2008-2032	11.14	1.40	7.08	19.71	15.85	-3.86
2033-2057	13.65	1.58	9.29	24.52	16.05	-8.47
75-year average:						
1983-2057	11.46	1.38	[4]6.79	19.64	15.76	-3.88

[1] Effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to different coverage provisions for Federal civilian employees under the respective programs. The difference does not materially affect the comparisons.

[2] HI cost rates exclude amounts required for trust fund building and maintenance.

[3] The balance is the total income rate minus the OASDHI cost rate. Positive balances are surpluses, and negative balances are deficits.

[4] Differs from the corresponding figure in the 1983 HI Annual Report as a result of an adjustment to treat the 1983 lump-sum transfer for deemed military service wage credits on a consistent basis with the OASDI estimates.

A description of the trend in long-range OASDI cost rates has already been given in this report. HI cost rates are projected to increase substantially under the alternative II-B assumptions, from their current level of about 2.70 percent to over 9.30 percent by the end of the long-range projection period. Combined OASDI and HI cost rates would also increase substantially after the turn of the century, reaching about 24.80 percent of taxable payroll by the year 2055 under the intermediate II-B assumptions. Beginning in about 2010, combined cost rates would exceed combined total income rates, with the difference growing over time. Over the 75-year period, the combined actuarial deficit would average 3.88 percent of taxable payroll under the alternative II-B assumptions.

As noted previously, in this report and in the HI Annual Report, long-range projections such as these are subject to considerable uncertainty and should be interpreted carefully. It seems clear, however, that even under reasonably normal economic and demographic conditions, the total cost of the Social Security program would be significantly in excess of scheduled income.

APPENDIX G.—STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein in evaluating the actuarial status of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting cost estimates are, in the aggregate, reasonable for the purpose of evaluating the financial and actuarial status of the trust funds, taking into consideration the experience and expectations of the program.

Harry C. Ballantyne

HARRY C. BALLANTYNE,
Associate of the Society of Actuaries,
Member of the American Academy of Actuaries,
Chief Actuary, Social Security Administration

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98TH CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

DOCUMENT
No. 98-75

1983 ANNUAL REPORT

FEDERAL HOSPITAL INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL HOSPITAL INSURANCE TRUST FUND

TRANSMITTING

THE 1983 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1817(b) OF THE SOCIAL SECURITY ACT, AS AMENDED

JUNE 28, 1983.—Referred to the Committee on Ways and Means and ordered to be printed.

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Hospital Insurance Trust Fund
Washington, D.C., June 24, 1983

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES
Washington, D.C.

SIR: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 18th such report), in compliance with the provisions of section 1817(b) of the Social Security Act.

Respectfully,

Donald T. Regan

DONALD T. REGAN,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

Raymond J. Donovan

RAYMOND J. DONOVAN,
Secretary of Labor,
and Trustee

Margaret M. Heckler

MARGARET M. HECKLER,
Secretary of Health and
Human Services, and Trustee

Carolyne K Davis

CAROLYNE K. DAVIS, Ph.D.,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Hospital Insurance Trust Fund
Washington, D.C., June 24, 1983

THE PRESIDENT OF THE SENATE
Washington, D.C.

SIR: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 18th such report), in compliance with the provisions of section 1817(b) of the Social Security Act.

Respectfully,

Donald T. Regan
DONALD T. REGAN,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

Raymond J. Donovan
RAYMOND J. DONOVAN,
Secretary of Labor,
and Trustee

Margaret M. Heckler
MARGARET M. HECKLER,
Secretary of Health and
Human Services, and Trustee

Carolyne K. Davis
CAROLYNE K. DAVIS, Ph.D.,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

1983 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE TRUST FUND

COMMUNICATION

From

THE BOARD OF TRUSTEES, FEDERAL
HOSPITAL INSURANCE TRUST FUND

Transmitting

THE 1983 ANNUAL REPORT OF THE BOARD, PURSUANT TO
SECTION 1817(b) OF THE SOCIAL SECURITY ACT
AS AMENDED

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Hospital Insurance Trust Fund
Washington, D.C., June 24, 1983

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES
Washington, D.C.

SIR: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 18th such report), in compliance with the provisions of section 1817(b) of the Social Security Act.

Respectfully,

DONALD T. REGAN,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

RAYMOND J. DONOVAN,
Secretary of Labor,
and Trustee

MARGARET M. HECKLER,
Secretary of Health and
Human Services, and Trustee

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1983 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE TRUST FUND

THE BOARD OF TRUSTEES

The Federal Hospital Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1817(b) of the Social Security Act, as amended. Currently, the Board has three members who serve in an ex officio capacity. These members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983) provide for the addition of two public members to the Board of Trustees. The two new members are to be nominated by the President for a term of four years, and are subject to confirmation by the Senate.

By law, the Secretary of the Treasury is designated as the Managing Trustee and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1817(b)(2) of the Social Security Act. This is the 1983 annual report, the eighteenth such report.

HIGHLIGHTS

(a) Disbursements of the hospital insurance trust fund in fiscal year 1982 were $34.9 billion, an increase of 19.2 percent over fiscal year 1981. Most of this increase was due to a substantial rise in the cost of hospital services. Increases in both payroll and nonpayroll expenses in hospitals were greater than comparable increases in the general economy.

(b) Income to the trust fund amounted to $37.6 billion, representing an increase of 14.4 percent in fiscal year 1982 over 1981. The majority of this increase was due to an increase in the maximum amount of taxable earnings and the higher level of earnings in covered employment.

(c) The trust fund increased from $18.1 billion to $20.8 billion at the end of fiscal year 1982. The effective annual rate of interest earned by the assets of the hospital insurance trust fund for the year ending June 30, 1982, was 10.2 percent.

(d) During December 1982, $12.4 billion was loaned to the Federal Old Age and Survivor Insurance Trust Fund under the interfund borrowing provisions of Public Law 97-123, reducing the balance in the HI trust fund to $8.2 billion on December 31, 1982.

(e) The Secretary of Health and Human Services promulgated an inpatient deductible of $304 for calendar year 1983 and a monthly premium of $132 for noninsured enrollees for the 12-month period beginning July 1983. However, Public Law 98-21 subsequently provided that the monthly premium of $113 for noninsured enrollees, which applied to the 12-month period beginning July 1982, continue to apply until December 31, 1983. The monthly premium will increase on a calendar year basis thereafter.

(f) Approximately 25.8 million persons aged 65 and over were protected by the hospital insurance program in July 1982. An additional 2.9 million disabled beneficiaries had protection in the same month.

SOCIAL SECURITY AMENDMENTS SINCE THE 1982 TRUSTEES REPORT

Public Law 97-248, the "Tax Equity and Fiscal Responsibility Act of 1982," which was enacted September 3, 1982, contains many provisions having an impact on the Federal Hospital Insurance Trust Fund. They include:

(1) The method by which Medicare reimburses hospitals is changed by replacing the previous per diem limits on routine inpatient costs with limits on total inpatient costs per admission and limits on increases in total inpatient costs per admission. These limits become effective for cost reporting periods beginning on or after October 1, 1982. The limits on increases in total inpatient costs per admission expire for cost reporting periods beginning on or after October 1, 1985.

(2) The Secretary is required to issue regulations establishing a single reimbursement limit for skilled nursing facilities and home health agencies based on the cost experience of freestanding facilities. Effective for home health agency reporting periods beginning on or after the date of enactment, and skilled nursing facility cost accounting periods beginning on or after October 1, 1982.

(3) The routine nursing salary cost differential used in determining reasonable costs is eliminated for both hospitals and skilled nursing facilities. Effective for cost reporting periods ending after September 30, 1982, but only for the portion occurring after that date.

(4) The costs incurred by a hospital or skilled nursing facility in complying with its free care obligations under the Hill-Burton Act are to be excluded from reasonable costs for Medicare reimbursement. All such costs that have been or will be incurred, except those recognized by final judgement of a U.S. Court of Appeals entered into prior to enactment, are covered by this provision.

(5) Medicare reimbursement for costs incurred for activities directly related to influencing employees with respect to unionization are prohibited after the date of enactment.

(6) The basis on which provider-based physicians are reimbursed is to be prescribed in regulations which distinguish between (a) professional medical services which are personally rendered to individual patients which contribute to the patient's diagnosis and treatment (reimbursed on the basis of reasonable charges under SMI), and (b) professional medical services of practitioners which are of benefit to patients generally (reimbursed on the basis of reasonable costs under HI). Reasonable cost reimbursement for provider-based services may not exceed a reasonable compensation equivalent established by the Secretary in regulations. Effective for cost reporting periods ending after September 30, 1982, but only for the portion occurring after that date.

(7) Payments made by any provider of services to contractors, employees of related organizations, consultants, or subcontractors are prohi-

bited where compensation is based on percentage arrangements except where such arrangements are reasonable and part of customary business practice or provide incentives for efficient and economical operation. The provision does not apply where limits on reimbursement to provider-based physicians have been implemented. For percentage agreements in force at enactment, the provision applies one year after enactment; where a provider can unilaterally terminate a percentage agreement, the provision applies 30 days after the first date the provider can terminate the arrangement.

(8) The general requirement limiting payment for services furnished by providers to the lower of the provider's actual charge or the reasonable cost of services will be eliminated for a class of providers if and when the Secretary determines and certifies to Congress that such action will not increase Medicare payments to that class of providers.

(9) The Secretary of Health and Human Services is required to publish regulations eliminating the current Medicare subsidy for private rooms that are not medically necessary. Effective no later than January 31, 1983.

(10) Medicare becomes the secondary payor for employees aged 65 through 69 (and their spouses of the same age) who are covered by health plan benefits of an employer. The Federal Age Discrimination in

Employment Act is also amended so that an employer can no longer exclude from coverage by his health care plan those benefits covered by Medicare, and must offer his employees aged 65 through 69 and their dependents health benefits coverage under the same conditions as offered his younger employees. The Age Discrimination in Employment Act is amended effective January 1983. The amendment to the Social Security Act is effective with respect to items and services furnished on or after January 1, 1983.

(11) Interest payments are required when the settlement of an account by or to a provider or supplier of services or a physician (but not a beneficiary) takes longer than 30 days after the date of determination. Effective upon enactment.

(12) For hospitals receiving periodic interim payments, such payments due during the last three weeks of September of 1983 and 1984 are delayed until the following October.

(13) Medicare coverage is extended to Federal employees, who are required to pay the hospital insurance portion of the FICA tax. Federal wages paid after December 31, 1982, would be covered for the purpose of earning quarters of coverage for determining Medicare eligibility. Persons employed by the Federal government as of January 1, 1983, and before that date would, if necessary, have their wages prior to January 1983 treated as if those wages were covered for purposes

of determining Medicare eligibility. Effective for wages paid in calendar years after 1982.

(14) The three-day prior hospitalization requirement may be eliminated for coverage of up to 100 days of extended care services in a skilled nursing facility. For persons covered without a prior hospital stay, the Secretary is authorized to impose limits on the scope or extent of services covered and on categories of individuals eligible. This provision is effective at such time as the Secretary determines that elimination of the three-day prior hospitalization requirement will neither lead to an increase in cost nor alter the acute care nature of the benefit.

(15) A six-month moratorium is imposed on the promulgation of changes in current regulations related to Medicare conditions of participation and certification procedures for skilled nursing facilites. The moratorium continues until the first day of the seventh calendar month beginning after the date of enactment.

(16) The Medicare contractor budget will be supplemented by an additional $45 million for fiscal years 1983, 1984 and 1985. The additional funds must be used exclusively for provider audits and medical necessity review. Effective October 1, 1982.

(17) The Secretary is required to undertake an initiative to improve medical review performed by Medicare contractors and encourage similar efforts by private insurers and other private entities.

Specific standards must be developed to measure the performance of Medicare contractors in identifying and reducing unnecessary utilization. Effective upon enactment.

(18) The Professional Standards Review Organization (PSRO) program is replaced by the Utilization and Quality Control Peer Review Organization (UQCPRO) program. Effective with contracts entered into or renewed on or after enactment.

(19) Medicare will temporarily cover hospice care for beneficiaries having a life expectancy of six months or less. Hospice care is available for two periods of 90 days and one period of 30 days in lieu of all other Medicare benefits, except the patient's attending physician and services not related to the terminal condition. This provision is effective November 1, 1983, and expires October 1, 1986.

(20) A new form of prospective reimbursement under risk sharing contracts with health maintenance organizations (HMOs) and other comprehensive medical plans is authorized. The new contracts prospectively pay HMOs and other eligible organizations at a rate equal to 95 percent of the adjusted average per capita cost (AAPCC) of providing services to Medicare beneficiaries in the same geographic area. Effective the later of the first day of the thirteenth month after enactment (October 1983), or one month after the Secretary notifies Congress that she is reasonably certain that the methodology for determining the prospective rate is developed and can be implemented.

Public Law 97-455, the "Virgin Islands Tax Reduction Act," which was enacted on January 12, 1983, contained two provisions which have an impact on the Federal Hospital Insurance Trust Fund. They are:

(1) The flow of continuing disability investigation cases (some of which involve Medicare benefits) sent to State agencies for periodic review may be reduced by the Secretary on a State-by-State basis depending on State workloads and staffing requirements. The slowing of review (and probably the rate of termination) is allowed even if it means that the initial periodic review cannot be completed within three years. Effective upon enactment.

(2) Medicare benefits may be continued, along with cash disability benefits, on request of the beneficiary through the Administrative Law Judge (ALJ) hearing on appealed termination decisions. If termination of benefits is upheld, the continued benefits would be treated as overpayments. Effective for benefits beginning January 1983 with respect to termination decisions made by State agencies between enactment and October 1983, but payment of such continued benefits could continue only through June 1984.

Public Law 97-448, the "Technical Corrections of 1982," which was enacted on January 12, 1983, amends the provision in the Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) which extends Medicare coverage to Federal employees. The amendment defines "Medicare qualified Federal employment" and the conditions under which spouses of transitionally insured Federal employees (those who use Federal employment on or before January 1, 1983, to qualify for entitlement) may become entitled. Spouses of Federal employees may qualify on the same basis as spouses of other insured workers and may become eligible for Medicare without waiting for the entitlement of the Federal employee. Effective January 1, 1983.

Public Law 98-21, the "Social Security Amendments of 1983," which was enacted April 20, 1983 contains a number of provisions which affect the hospital insurance trust fund. The provisions are:

(1) Beginning with hospital accounting years starting on or after October 1, 1983, hospitals (except for psychiatric, rehabilitative, long-term care and children's hospitals) will no longer be reimbursed on a reasonable cost basis. Hospitals will be paid a prospectively determined amount per discharge based upon diagnosis related groups (DRGs).

Separate payment rates will apply to urban and rural areas. For the first three years, separate rates will be determined for each of the nine census regions, and there will be a blend of national and regional DRG rates and each hospital's cost base. The cost of capital and the direct cost of medical education will continue to be reimbursed on the basis of reasonable costs. The adjustment under the law prior to amendment for indirect costs of medical education will be doubled. The rate of return on equity for proprietary hospitals will be reduced by one-third. The Secretary will provide additional payments for outlier cases.

Payment for all non-physician services provided to hospital inpatients must be made under HI, except that the Secretary may waive these restrictions during the transition period for hospitals that have billed extensively under SMI. Medicare payments must be made under a state system if the system meets certain statutory requirements. Upon request of the state of New York and/or Massachusetts, or the parties to their demonstration agreements, the Secretary of Health and Human Services would be required to modify the terms of their demonstration agreement so the States would not be required to maintain a rate of increase in their Medicare hospital costs below the national rate of increase in such costs.

(2) The implementation date of section 102 of Public Law 97-248, which required the Secretary to establish a single reimbursement limit for both hospital-based and freestanding skilled nursing facilities, was delayed for one year.

(3) Social security coverage is mandated for employees of non-profit organizations, effective January 1, 1984.

(4) No termination of coverage by State and local governments or entities will be permitted. Such entities now outside the system will be permitted to rejoin. Effective upon enactment.

(5) Beginning January 1, 1984, the HI tax rate for the self-employed will be increased to equal the combined employee-employer tax rate.

(6) The current authority for interfund borrowing among the OASI, DI and HI trust funds (authorized in 1981) is extended through 1987 with repayment of any remaining loan balances to be made during 1988-1989 in 24 equal monthly payments. The borrowing fund would have to repay interest monthly. No trust fund may borrow from the HI fund when the HI fund ratio is below 10 percent and no trust fund may borrow an amount which would reduce the HI fund ratio below that level. Loans would be repayable when the fund ratio of the borrowing fund exceeds 15 percent.

(7) The Board of Trustees is required to notify Congress whenever it is of the opinion that the amount of any of the trust funds may become unduly small and recommend a specific legislative plan to remedy the shortfall. The intent of such legislative action would be to limit its effectiveness to that period necessary to restore the fund to solvency. Effective upon enactment.

(8) The HI fund would be credited on May 20, 1983, with the excess of the present value of past and future benefits resulting from gratuitious military wage credits over any amounts previously transferred for such benefits. In addition, the trust fund would be credited with the combined employer-employee HI taxes on gratuitous military wage credits for service after 1965 and before 1984. After 1983, HI taxes on military wage credits will be credited to the HI fund on July 1 of each year.

(9) Hospital insurance trust fund operations would be removed from the unified budget beginning in fiscal year 1992.

(10) Workers who are disabled before age 31, recover and then become disabled after age 31, may be insured for disability benefits if they had coverage in half the calendar quarters after age 21 and through the quarter in which the later period of disability began. Effective for applications filed after enactment.

(11) The premium increase for those uninsured individuals aged 65 or older who purchase Federal Hospital Insurance is delayed until January 1984, and will increase on a calendar year basis thereafter.

(12) Two members of the public are added to the Board of Trustees. The two public members are to be nominated by the President for terms of four years and confirmed by the Senate. Both public members cannot be members of the same political party. A person serving on the Board of Trustees is no longer considered a fiduciary and cannot be held personally liable for action taken as a member of the Board of Trustees. Effective upon enactment.

NATURE OF THE TRUST FUND

The Federal Hospital Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the hospital insurance program are handled through this fund.

The major sources of receipts of the trust fund are (1) amounts appropriated to it under permanent appropriation on the basis of contributions paid by workers and their employers, and by individuals with self-employment income, in work covered by the hospital insurance program and (2) amounts deposited in it representing contributions paid by workers employed by State and local governments and by such employers with respect to work covered by the program. The coverage of the hospital insurance program includes workers covered under the old-age, survivors, and disability insurance program, those covered under the railroad retirement program, and Federal employees.

All employees, and their employers, in employment covered by the program are required to pay contributions with respect to the wages of individual workers. Cash tips, covered as wages beginning in 1966 under the 1965 amendments, are an exception. Employees pay contributions with respect to cash tips but, prior to 1978, employers did not. Beginning in 1978, under the 1977 amendments, employers are required to pay contributions on that part of the tip income deemed to be wages under the Federal minimum wage law. All covered self-employed persons are required to pay contributions with respect to their self-employment income.

In general, an individual's contributions are computed on annual wages or self-employment income, or both wages and self-employment income combined, up to a specified maximum annual amount, with the contributions being determined first on the wages and then on any self-employment income up to the maximum annual amount.

The hospital insurance contribution rates applicable to taxable earnings in each of the calendar years 1966 and later are shown in table 1. For 1984 and later, the contribution rates shown are the rates scheduled in the provisions of present law. The maximum amount of annual earnings taxable in each year 1966-83 are also shown. For 1975-78, the contribution and benefit bases were determined under the automatic increase provisions in section 230 of the Social Security Act. In 1979, 1980, and 1981, the bases increased to the specified amounts as provided under the 1977 amendments. After 1981, the automatic increase provisions are again applicable.

Except for amounts received under State agreements (to effectuate coverage under the program for State and local government employees) and deposited directly in the trust fund, all contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury as internal revenue collections. The contributions received are automatically appropriated to the trust fund, on an estimated basis. The exact amount of contributions received is not known initially since hospital insurance contributions, old-age, survivors, and disability insurance contributions, and individual income taxes are not separately identified in collection reports received by the Treasury Department. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable on the basis of reported earnings.

Prior to May 1983, the internal revenue collections were transferred to the trust funds immediately upon receipt. In May 1983 and later, estimated total collections for each montn are credited to the trust funds on the first day of the month. As the actual collections are received during the month, they are deposited in the general fund of the Treasury and remain there. The trust funds may pay interest to the general fund to reimburse it for the interest lost because of this provision.

An employee who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum can receive a refund of the contributions he paid on such excess wages. The amount of contributions subject to refund for any period is a charge against the trust fund.

Another source from which receipts of the trust fund are derived is interest received on investments held by the fund. The investment procedures of the fund are described later in this section.

The income and expenditures of the trust fund are also affected by the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the railroad retirement program and the hospital insurance program.

Sections 217(g) and 229(b) of the Social Security Act authorize annual reimbursements from the general fund of the Treasury to the hospital insurance trust fund for any costs arising from the granting of noncontributory wage credits for military service, according to periodic determinations made by the Secretary of Health and Human Services. These sections have been modified as described in the "Social Security Amendments since the 1982 Trustees Report" section.

Section 231 of the Social Security Act authorizes reimbursement from the general fund of the Treasury to the hospital insurance trust fund for any costs arising from the granting of noncontributory wage credits to individuals who were interned during World War II at a place within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

Under section 103 of the Social Security Amendments of 1965, hospital insurance benefits are provided to certain uninsured persons aged 65 and over. Such payments are made initially from the hospital insurance trust fund, with reimbursement from the general fund of the Treasury for the costs, including administrative expenses, of the payments. The reimbursements so made are on a provisional basis and are subject to adjustment, with appropriate interest allowances, as the actual experience develops and is analyzed.

Section 1818 of the Social Security Act provides that certain persons not eligible for hospital insurance protection either on an insured basis or on the uninsured basis described in the previous paragraph may obtain protection by enrolling in the program and paying a monthly premium.

Section 201(i) of the Social Security Act authorizes the Managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the hospital insurance program are paid from the trust fund. All expenses incurred by the Department of Health and Human Services and by the Treasury Department in carrying out the provisions of title XVIII of the Social Security Act pertaining to the hospital insurance program and of the Internal Revenue Code relating to the collection of contributions are charged to the trust fund. The Secretary of Health and Human Services certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

Hospitals, at their option, are permitted to combine their billing for both hospital and physician components of radiology and pathology services rendered hospital inpatients by hospital-based physicians. Where hospitals elect this billing procedure, payments are made initially from the hospital insurance trust fund, with reimbursement from the supplementary medical insurance trust fund. The reimbursements so made are on a provisional basis and are subject to adjustment, with appropriate interest allowance, as the actual experience develops and is analyzed.

The Social Security Amendments of 1972 provide that hospital admissions under all Federal Health Insurance programs be reviewed by Professional Standards Review Organizations. Under section 1168 of the Social

Security Act, payments for the costs of such reviews are made initially from the hospital insurance trust fund, with reimbursement from the general fund of the Treasury for the costs of reviews of admissions covered under Federal programs other than the hospital insurance program. This provision was subsequently repealed.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under the hospital insurance and supplementary medical insurance programs. A sizable portion of the costs of such experiments and demonstration projects are paid from the hospital insurance and supplementary medical insurance trust funds.

Congress has authorized expenditures from the trust funds for construction, rental, and lease or purchase contracts of office buildings and related facilities for use in connection with the administration of the hospital insurance program. Both the capital costs of construction financed directly through the trust funds and the rental, lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested, on a daily basis, in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such month.

TABLE 1.--CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar Years	Maximum taxable amount of annual earnings	Contribution rate (Percent of taxable earnings) Employees and employers, each	Self-employed
Past experience:			
1966	$ 6,600	0.35	0.35
1967	6,600	0.50	0.50
1968-71	7,800	0.60	0.60
1972	9,000	0.60	0.60
1973	10,800	1.00	1.00
1974	13,200	0.90	0.90
1975	14,100	0.90	0.90
1976	15,300	0.90	0.90
1977	16,500	0.90	0.90
1978	17,700	1.00	1.00
1979	22,900	1.05	1.05
1980	25,900	1.05	1.05
1981	29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
Changes scheduled in present law:			
1984	Subject to	1.30	2.60
1985	automatic	1.35	2.70
1986 & later	increase.	1.45	2.90

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1982

A statement of the incomes and disbursements of the Federal Hospital Insurance Trust Fund in fiscal year 1982, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2. Corresponding amounts for fiscal year 1981 are also shown in the table.

The total assets of the trust fund amounted to $18,093 million on September 30, 1981. During fiscal year 1982, total receipts amounted to $37,611 million, and total disbursements were $34,864 million. The assets of the trust fund thus increased $2,747 million during the year to a total of $20,840 million on September 30, 1982.

Included in total receipts during fiscal year 1982 were $31,017 million representing contributions appropriated to the trust fund and $3,444 million representing amounts received in accordance with State agreements for coverage of state and local government employees and deposited in the trust fund. As an offset, $70 million was transferred from the trust fund into the Treasury as repayment for the estimated amount of contributions subject to refund to employees who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum earnings base.

Net contributions amounted to $34,390 million, representing an increase of 13.0 percent over the amount of $30,425 million for the preceding 12-month period. This growth in contribution income resulted primarily from (1) the higher level of earnings in covered employment; and (2) the two increases in the maximum annual amount of earnings taxable--from $25,900 to $29,700 and from $29,700 to $32,400--that became effective on January 1, 1981, and January 1, 1982, respectively.

The section entitled "Nature of the Trust Fund" referred to provisions of the Social Security Act under which certain persons aged 65 and over but not otherwise eligible for hospital insurance protection may obtain such protection by enrolling in the program and paying a monthly premium. Premiums collected from such voluntary participants in fiscal year 1982 amounted to about $24.8 million.

In accordance with the provisions of the Railroad Retirement Act which coordinate the railroad retirement and the hospital insurance programs and which govern the financial interchange arising from the allocation of costs between the two systems, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of $308,100,000 from the railroad retirement account to the hospital insurance trust fund would place this fund in the same position, as of September 30, 1981, in which it would have been if railroad employment had always been covered under the Social Security Act. This amount, together with interest to the date of transfer amounting to $43,292,000, was transferred to the trust fund in June 1982.

In accordance with provisions for annual reimbursement from the general fund of the Treasury for the cost of granting noncontributory wage credits for military service, the Secretary of Health and Human

Services determined in 1980 the level annual appropriation necessary to amortize the estimated total additional costs for military service prior to 1957. This cost is amortized over a 34-year period, which began in fiscal year 1982, with an allowance for the appropriations which were made for fiscal years 1966-81. The annual amount resulting from this determination was $207 million.

Again, the section entitled "Nature of the Trust Fund" referred to provisions under which the hospital insurance trust fund is to be reimbursed from the general fund of the Treasury for costs of paying benefits under this program on behalf of certain uninsured persons. The reimbursement in fiscal year 1982 amounted to $808 million, consisting of $771 million for benefit payments, $13 million for administrative expenses, and $24 million for interest on adjustments to costs in prior fiscal years.

The remaining $1,829 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the $34,864 million in total disbursements, $34,343 million represented benefits paid directly from the trust fund for health services covered under title XVIII of the Social Security Act. Included in benefit payments are transfers amounting to $6 million per year that were made from the supplementary medical insurance trust fund to adjust for the loss of interest caused by the delay in transferring payments for the costs of radiology and pathology services that were paid initially from the hospital insurance trust fund but that were liabilities of the supplementary medical insurance trust fund. Benefit payments increased 18.8 percent in fiscal year 1982 over the corresponding amount of $28,907 million paid during the preceding 12 months.

The remaining $521 million of disbursements was for net administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds--old-age and survivors insurance, disability insurance, hospital insurance, and supplementary medical insurance--on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Adminstration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are effected by interfund transfers, including transfers between the hospital insurance and supplementary medical insurance trust funds and the program management general fund account, with appropriate interest allowances.

Table 3 compares the actual experience in fiscal year 1982 with the estimates presented in the 1981 and 1982 annual reports. The section entitled "Nature of the Trust Fund" referred to the appropriation of contributions to the trust funds on an estimated basis, with subsequent periodic adjustments to account for differences from the amounts of contributions actually payable on the basis of reported earnings. In interpreting the figures in table 3, it should be noted that the "actual" amount of contributions in fiscal year 1982 reflects the aforementioned type of adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions in fiscal year 1982 does not reflect adjustments to contributions for fiscal year 1982 that were to be made after September 30, 1982.

The assets of the hospital insurance trust fund at the end of fiscal year 1981 totaled $18,093 million, consisting of $18,191 million in the form of obligations of the U.S. Government or of federally-sponsored agency obligations and as an offset, an extension of credit of $99 million against securities to be redeemed. The assets of the hospital insurance trust fund at the end of fiscal year 1982 totaled $20,840 million, consisting of $20,800 million in the form of obligations of the U.S. Government or of federally-sponsored agency obligations and an undisbursed balance of $40 million. Table 4 shows the total assets of the fund and their distribution at the end of fiscal years 1981 and 1982.

The net increase in the par value of the investments held by the fund during fiscal year 1981 amounted to $3,535 million. New securities at a total par value of $37,147 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was $33,611 million.

The net increase in the par value of the investments held by the fund during fiscal year 1982 amounted to $2,608 million. New securities at a total par value of $42,229 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was $39,621 million.

The effective annual rate of interest earned by the assets of the hospital insurance trust fund during the 12 months ending on June 30, 1982, was 10.2 percent. (This period is used because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on public-debt obligations issued for purchase by the trust fund in June 1982 was 13.25 percent, payable semiannually.

TABLE 2.--STATEMENT OF OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND
DURING FISCAL YEARS 1981 AND 1982
(In thousands of dollars)

	Fiscal Year 1981	Fiscal Year 1982
Total assets of the trust fund, beginning of period	$14,489,913	$18,092,929
Receipts:		
Appropriation of employment taxes	$27,482,186	$31,016,681
Less: refunds of employment taxes	88,500	70,230
Deposits arising from State agreements	3,031,534	3,443,728
Interest on investments	1,271,713	1,818,505
Other	33,611	20
Premiums collected from voluntary participants	20,759	24,814
Transfer from railroad retirement account	246,700	308,100
Transitional uninsured coverage	659,000	808,000
Military service credits	141,000	207,000
Interest on reimbursements, SSA 1/	-954	-366
Interest on reimbursements, HCFA 1/	36,520	11,110
Interest on reimbursements, railroad	29,768	43,292
Total receipts	$32,863,338	$37,610,654
Expenditures:		
Benefit payments	28,907,417	34,343,378
Administrative expenses:		
Treasury administrative expenses	7,437	19,783
Salaries and expenses, SSA	190,537	221,812
Salaries and expenses, HCFA 2/	315,216	303,462
Salaries and expenses, Office of Secretary	4,838	4,383
Construction	339	7,663
Cost of experiments and demonstration projects	1,564	273
Professional Standard Review Organization	40,700	27,746
Reimbursement of SSA expenses 3/	7,326	764
Reimbursement of HCFA expenses 3/	-215,154	-65,233
Total expenditures	29,260,321	34,864,031
Total assets of the trust fund, end of period	$18,092,929	$20,839,552

1/ A positive figure represents a transfer of interest to the hospital insurance trust fund from the other trust funds. A negative figure represents a transfer of interest from the hospital insurance trust fund to the other trust funds.

2/ Includes administrative expenses of the intermediaries.

3/ A positive figure represents a transfer from the hospital insurance trust fund to the other trust funds. A negative figure represents a transfer to the hospital insurance trust fund from the other trust funds.

NOTE: Totals do not necessarily equal the sum of rounded components.

TABLE 3.--COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND, FISCAL YEAR 1982

(Dollar amounts in millions)

		Comparison of actual experience with estimates for fiscal year 1982 published in--			
		1982 Report		1981 Report	
Item	Actual Amount	Estimated Amount	Actual as percentage of estimate	Estimated Amount	Actual as percentage of estimate
Net contributions	$34,390	$34,359	100	$35,690	96
Benefit payments	$34,343	$33,788	102	$32,995	104

TABLE 4.--ASSETS OF THE HOSPITAL INSURANCE TRUST FUND BY TYPE
AT THE END OF FISCAL YEARS 1981 and 1982 1/

	September 30, 1981	September 30, 1982
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:		
12 1/4-percent, 1983	—	$ 990,253,000.00
14 7/8-percent, 1982	$ 1,073 817,000.00	—
Bonds:		
7 1/8-percent, 1982	529,979,000.00	529,979,000.00
7 3/8-percent, 1983	752,199,000.00	—
7 3/8-percent, 1984	165,760,000.00	113,226,000.00
7 3/8-percent, 1985	165,759,000.00	165,759,000.00
7 3/8-percent, 1986	165,759,000.00	165,759,000.00
7 3/8-percent, 1987	165,759,000.00	165,759,000.00
7 3/8-percent, 1988	165,760,000.00	165,760,000.00
7 3/8-percent, 1989	165,760,000.00	165,760,000.00
7 3/8-percent, 1990	971,444,000.00	971,444,000.00
7 1/2-percent, 1983	109,372,000.00	109,372,000.00
7 1/2-percent, 1984	109,372,000.00	109,372,000.00
7 1/2-percent, 1985	109,373,000.00	109,373,000.00
7 1/2-percent, 1986	109,373,000.00	109,373,000.00
7 1/2-percent, 1987	109,373,000.00	109,373,000.00
7 1/2-percent, 1988	109,372,000.00	109,372,000.00
7 1/2-percent, 1989	109,372,000.00	109,372,000.00
7 1/2-percent, 1990	109,372,000.00	109,372,000.00
7 1/2-percent, 1991	660,616,000.00	660,616,000.00
7 5/8 percent, 1983	405,685,000.00	405,685,000.00
7 5/8-percent, 1984	405,685,000.00	405,685,000.00
7 5/8-percent, 1985	405,685,000.00	405,685,000.00
7 5/8-percent, 1986	405,685,000.00	405,685,000.00
7 5/8-percent, 1987	405,685,000.00	405,685,000.00
7 5/8-percent, 1988	405,684,000.00	405,684,000.00
7 5/8-percent, 1989	405,684,000.00	405,684,000.00
8 1/4-percent, 1983	95,347,000.00	95,347,000.00
8 1/4-percent, 1984	95,347,000.00	95,347,000.00
8 1/4-percent, 1985	95,347,000.00	95,347,000.00
8 1/4-percent, 1986	95,346,000.00	95,346,000.00
8 1/4-percent, 1987	95,346,000.00	95,346,000.00
8 1/4-percent, 1988	95,347,000.00	95,347,000.00
8 1/4-percent, 1989	95,347,000.00	95,347,000.00
8 1/4-percent, 1990	95,347,000.00	95,347,000.00
8 1/4-percent, 1991	95,347,000.00	95,347,000.00
8 1/4-percent, 1992	201,684,000.00	201,684,000.00
8 1/4-percent, 1993	706,163,000.00	706,163,000.00
8 3/4-percent, 1983	123,297,000.00	123,297,000.00
8 3/4-percent, 1984	123,297,000.00	123,297,000.00
8 3/4-percent, 1985	123,297,000.00	123,297,000.00
8 3/4-percent, 1986	123,297,000.00	123,297,000.00
8 3/4-percent, 1987	123,297,000.00	123,297,000.00
8 3/4-percent, 1988	123,297,000.00	123,297,000.00
8 3/4-percent, 1989	123,297,000.00	123,297,000.00
8 3/4-percent, 1990	123,297,000.00	123,297,000.00
8 3/4-percent, 1991	123,297,000.00	123,297,000.00
8 3/4-percent, 1992	123,297,000.00	123,297,000.00
8 3/4-percent, 1993	123,297,000.00	123,297,000.00
8 3/4-percent, 1994	849,440,000.00	849,440,000.00
9 3/8-percent, 1983	130,209,000.00	130,209,000.00
9 3/8-percent, 1984	130,209,000.00	130,209,000.00
9 3/8-percent, 1985	130,209,000.00	130,209,000.00
9 3/8-percent, 1986	130,210,000.00	130,210,000.00
9 3/8-percent, 1987	130,210,000.00	130,210,000.00
9 3/8-percent, 1988	130,210,000.00	130,210,000.00
9 3/8-percent, 1989	130,210,000.00	130,210,000.00
9 3/8-percent, 1990	130,210,000.00	130,210,000.00
9 3/8-percent, 1991	130,210,000.00	130,210,000.00
9 3/8-percent, 1992	130,210,000.00	130,210,000.00
9 3/8-percent, 1993	130,210,000.00	130,210,000.00
9 3/8-percent, 1994	130,210,000.00	130,210,000.00
9 3/8-percent, 1995	979,670,000.00	979,670,000.00
13 [illegible]-percent, 1983	197,647,000.00	197,647,000.00
13 [illegible]-percent, 1984	197,647,000.00	197,647,000.00
13 [illegible]-percent, 1985	197,647,000.00	197,647,000.00
13 [illegible]-percent, 1986	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1987	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1988	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1989	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1990	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1991	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1992	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1993	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1994	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1995	197,646,000.00	197,646,000.00
13 [illegible]-percent, 1996	1,177,276,000.00	1,177,276,000.00
13 1/8-percent, 1984	—	272,853,000.00
13 1/8-percent, 1985	—	272,853,000.00
13 1/8-percent, 1986	—	272,854,000.00
13 1/8-percent, 1987	—	272,854,000.00
13 1/8-percent, 1988	—	272,854,000.00
13 1/8-percent, 1989	—	272,854,000.00
13 1/8-percent, 1990	—	272,853,000.00
13 1/8-percent, 1991	—	272,853,000.00
13 1/8-percent, 1992	—	272,853,000.00
13 1/8-percent, 1993	—	272,853,000.00
13 1/8-percent, 1994	—	272,853,000.00
13 1/8-percent, 1995	—	272,853,000.00
13 1/8-percent, 1996	—	272,853,000.00
13 1/8-percent, 1997	—	1,490,129,000.00
Total public-debt obligations sold only to this fund (special issues)	$18,141,479,000.00	$20,799,981,000.00
Investments in federally-sponsored agency obligations:		
Participations certificates:		
Federal Assets Liquidation Trust-Government National Mortgage Association:		
5.20-percent, 1982	50,000,000.00	—
Total investments	$18,191,479,000.00	$20,799,981,000.00
Undisbursed balance	-50,558,787.63 2/	38,811,387.67
Total assets	$18,090,920,212.37	$20,838,792,387.67

1/ The assets are carried at par value, which is the same as book value.
2/ The negative figure represented an extension of credit which was covered by redemption of securities on the

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND DURING THE PERIOD OCTOBER 1, 1982 TO DECEMBER 31, 1985

The expected operations of the trust fund during fiscal years 1983-85 are shown in table 5, together with the past experience of the program. The projection shown in table 5--and the entirety of this section--is based on two intermediate sets of projection assumptions labeled alternative II-A and alternative II-B, which are presented in detail in Appendix A. The economic assumptions underlying these two alternative sets of assumptions are described in detail in the 1983 Annual Report of the Board of Trustees of the Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds.

Income received through the financial interchange between the railroad retirement account and the trust fund under the provisions of the Railroad Retirement Act is estimated on the same basis as income from hospital insurance contributions. Estimates of the corresponding outgo are included in the disbursement items.

Estimated income to the trust fund which is appropriated from general revenues to reimburse the program for the cost of coverage of noninsured persons is the same as the estimates of disbursements for such persons, net of corrections for differences between costs and amounts transferred for previous years. Premium income and disbursements for other noninsured persons over age 65 who may enroll in the hospital insurance program on a voluntary basis are based on an estimated enrollment of 21,000 in fiscal year 1983.

Reimbursement from general revenues for military wage credits was $207 million for fiscal years 1982 and 1983. This was based on the determination made by the Secretary of Health and Human Services in 1980 of the level annual appropriations necessary to amortize the additional costs arising from these wage credits. Section 151 of Public Law 98-21 modified the reimbursement from general revenues for military wage credits as described in the "Social Security Amendments since the 1982 Trustees Report" section. The new reimbursement amounts for 1984 and later are included in payroll taxes on tables 5 and 6.

The investment of new assets received during fiscal year 1983-85 is assumed to be in the form of special public-debt obligations bearing interest rates ranging from 10 1/8 percent, payable semiannually in 1983, to 6 percent in 1985. The average effective annual rate of interest on the assets held by the hospital insurance trust fund on September 30, 1982, was 10.6 percent.

Disbursements for benefits are projected to increase sharply in fiscal years 1983-85, primarily as a result of the high rate of increase in hospital costs reimbursable under the program. The expenditures for benefit payments shown in table 5 differ slightly from those shown in the 1984 Federal Budget. These estimates are based on more recent demographic and economic projections, and they do not reflect the implementation of proposed changes in regulations which were included in the budget.

The interfund loan to the old age and survivor insurance trust fund from the hospital insurance trust fund as provided for by the interfund borrowing provisions of Public Law 97-123 is shown in table 5. A loan would technically still be considered an asset of the hospital insurance trust fund. However, since these assets would not be immediately available for payment of hospital insurance benefits, they are subtracted out of the fund at end of year column. A negative amount is a loan to the old age and survivor insurance trust fund. A positive amount is a repayment of principal to the hospital insurance trust fund. Interest payments on the outstanding loan are payable monthly and are included in the interest on investments and other income column.

The actual operations of the hospital insurance program is organized, in general, on a calendar year basis. Earnings subject to taxation and the applicable tax rates are established by calendar year, as are the inpatient deductible and other cost sharing amounts. The projected operations of the trust fund on a calendar year basis are shown in table 6, according to the same assumptions as used in table 5. The ratios of assets in the trust fund at the beginning of each calendar year to total disbursements during that year are shown in table 7 for past years and as projected through 1985.

TABLE 5.--OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING FISCAL YEARS 1967-85
(In millions)

Fiscal Year 1/	Income: Payroll taxes	Income: Transfers from railroad retirement account	Income: Reimbursement for uninsured persons	Income: Premiums from voluntary enrollees	Income: Reimbursement for military wage credits	Income: Interest on investments and other income 2/	Income: Total income	Disbursements: Benefits payments	Disbursements: Administrative expenses 3/	Disbursements: Total disbursements	Interfund borrowing transfers 4/	Trust Fund: Net increase fund	Trust Fund: Fund at end of year
Historical Data:													
1967	$ 2,688	$ 16	$327		$ 11	$ 46	$ 3,089	$ 2,508	$ 89	$ 2,597		$ 492	$ 1,343
1968	3,514	44	273		11	61	3,902	3,736	79	3,815		88	1,431
1969	4,423	54	749		22	96	5,344	4,654	104	4,758		586	2,017
1970	4,785	64	617		11	137	5,614	4,804	149	4,953		661	2,677
1971	4,898	66	863		11	180	6,018	5,442	150	5,592		426	3,103
1972	5,226	66	503		48	188	6,031	6,108	167	6,276		-245	2,859
1973	7,663	63	381		48	196	8,352	6,648	194	6,842		1,510	4,369
1974	10,602	99	451	$ 4	48	405	11,610	7,806	259	8,065		3,545	7,914
1975	11,291	132	481	6	48	609	12,568	10,353	259	10,612		1,956	9,870
1976	12,031	138	610	8	48	709	13,544	12,267	312	12,579		966	10,836
T.Q.	3,366	143	0 5/	2	0	5	3,516	3,315	89	3,404		112	10,948
1977	13,649	0 6/	803 5/	11	141	770	15,374	14,906	301	15,207		167	11,115
1978	16,677	214 6/	688	12	143 7/	809	18,543	17,411	451	17,862		681	11,796
1979	19,927	191	734	17	141	901	21,910	19,891	452	20,343		1,567	13,363
1980	23,244	244	697	17	141	1,072	25,415	23,790	497	24,288		1,127	14,490
1981	30 25	276	659	21	141	1,341	32,863	28,907	353	29,260		3,603	18,093
1982	34,390	308	808	25	207	1,873	37,611	34,343	521	34,864		2,747	20,840
Projection:													
Alternati : II-A													
1983	36,642	358	902	27	3,663 8/	2,257	43,849	38,547	539	39,086	-12,437	-7,674	13,166
1984	41,056	343	790	36	79	2,693	44,997	44,007	570	44,577	600	1,020	14,186
1985	46,413	344	765	44	84	2,721	50,371	50,074	603	50,677		-306	13,880
Alternative II-B													
1983	36,644	358	902	27	3,663 8/	2,249	43,843	38,547	539	39,086	-12,437	-7,680	13,160
1984	40,828	344	791	35	79	2,674	44,752	44,137	568	44,705	500	547	13,707
1985	46,320	342	771	44	84	2,674	50,235	50,532	604	51,136		-901	12,806

1/ For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three-month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.," the transition quarter; fiscal years 1977-84 cover the interval from October 1 through September 30.

2/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

3/ Includes costs of experiments and demonstration projects.

4/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted out of the HI fund at end of year. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

5/ The 1977 transfer is for benefits and administrative expenses during the five-quarter period covering the transition quarter and fiscal year 1977.

6/ The 1978 transfer is for contributions during the five-quarter period covering the transition quarter and fiscal year 1977.

7/ Includes $2 million in reimbursement from general revenues for costs arising from the granting of noncontributory wage credits to persons of Japanese ancestry who were interned during World War II.

8/ Includes the lump sum general revenue transfer of $3,456 million as provided for by Section 151 of P.L. 98-21.

TABLE 6.—OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1966-85
(In millions)

	Income							Disbursements				Trust Fund	
Calendar Year	Payroll taxes	Transfers from railroad retirement account	Reimbursement for uninsured persons	Premiums from voluntary enrollees	Reimbursement for military wage credits	Interest on investments and other income 1/	Total income	Benefits payments	Administrative expenses 2/	Total disbursements	Interfund borrowing transfers 3/	Net increase fund	Fund at end of year
Historical Data:													
1966	$ 1,858	$ 16	$ 26		$ 11	$ 32	$ 1,943	$ 891	$108	$ 999		$ 944	$ 944
1967	3,152	44	301		11	51	3,559	3,353	77	3,430		129	1,073
1968	4,116	54	1,022		22	74	5,287	4,179	99	4,277		1,010	2,083
1969	4,473	64	617		11	113	5,279	4,739	118	4,857		422	2,505
1970	4,881	66	863		11	158	5,979	5,124	157	5,281		698	3,202
1971	4,921	66	503		48	193	5,732	5,751	150	5,900		-168	3,034
1972	5,731	63	381		48	180	6,403	6,318	185	6,503		-99	2,935
1973	9,944	99	451	$ 2	48	278	10,821	7,057	232	7,289		3,532	6,467
1974	10,844	132	471	5	48	523	12,024	9,099	272	9,372		2,652	9,119
1975	11,502	138	621	7	48	664	12,980	11,315	266	11,581		1,399	10,517
1976	12,727	143	0 4/	9	141	746	13,766	13,340	339	13,679		88	10,605
1977	14,114	0 5/	803 4/	12	143 6/	784	15,856	15,737	283	16,019		-163	10,442
1978	17,324	214 5/	688	13	141	834	19,213	17,682	496	18,178		1,035	11,477
1979	20,768	191	734	16	141	975	22,825	20,623	450	21,073		1,751	13,228
1980	23,848	244	697	18	141	1,149	26,097	25,064	512	25,577		521	13,749
1981	32,959	276	659	22	207	1,603	35,725	30,342	384	30,726		4,999	18,748
1982	34,586	351	808	24	207	2,022	37,998	35,631	513	36,144	-12,437	-10,584	8,164
Projection:													
Alternative II-A													
1983	37,454	358	902	28	3,456 7/	2,538	44,736	40,616	545	41,161		3,575	11,739
1984	41,925	343	790	39	79	2,619	45,795	45,920	578	46,498	600	-103	11,636
1985	47,506	344	765	45	84	2,595	51,339	51,178	611	51,789		-450	11,186
Alternative II-B													
1983	37,422	358	902	28	3,456 7/	2,539	44,705	40,616	545	41,161		3,544	11,708
1984	41,684	344	791	39	79	2,619	45,556	45,974	576	46,550	500	-494	11,214
1985	47,486	342	771	45	84	2,558	51,286	51,659	613	52,272		-986	10,228

1/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

2/ Includes costs of experiments and demonstration projects.

3/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted out of the HI fund at end of year. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

4/ No transfer is made in 1976 because of the change in transfer dates from December to March. The 1977 transfer is for benefits and administrative expenses during the 15-month period beginning July 1976 and ending September 1977.

5/ No transfer is made in 1977 because of the change in transfer dates from August to June. The 1978 transfer is for contributions during the five-quarter period covering the transition quarter and fiscal year 1977.

6/ Includes $2 million in reimbursement form general revenues for costs arising from the granting of noncontributory wage credits to persons of Japanese ancestry who were interned during World War II.

7/ Includes the lump sum general revenue transfer of $3,456 million as provided for by Section 151 of P.L. 98-21.

TABLE 7.--RATIO OF ASSETS IN THE FUND AT THE BEGINNING OF THE YEAR TO DISBURSEMENTS DURING THE YEAR FOR THE HOSPITAL INSURANCE TRUST FUND
(In percent)

Calendar Year	Ratio
Historical Data:	
1967	28%
1968	25
1969	43
1970	47
1971	54
1972	47
1973	40
1974	69
1975	79
1976	77
1977	66
1978	57
1979	54
1980	52
1981	45
1982	52
Projection:	
Alternative II-A	
1983	20
1984	25
1985	22
Alternative II-B	
1983	20
1984	25
1985	21

ACTUARIAL STATUS OF THE TRUST FUND

The Board of Trustees has adopted the general financing principle that annual income to the hospital insurance program should be approximately equal to annual outlays of the program plus an amount to maintain a balance in the trust fund equal to one-half year's expenditures. This principle reflects the view that a small fund is needed for the contingency that future income and outgo may differ substantially from projected levels, but that it is unnecessary and impractical to fund fully the future benefits of workers as they accrue the right to those future benefits.

The projected expenditures under the program, expressed as percentages of taxable payroll, are summarized for selected years over the next 25-year period in table 8. The ratio of expenditures to taxable payroll has increased from 0.94 percent in 1967 to 2.69 percent in 1982, reflecting both the higher rate of increase in hospital costs than in earnings subject to hospital insurance taxes and the extension of hospital insurance benefits to disabled beneficiaries and persons suffering from end-stage renal disease. Further increases in this ratio to 2.85 percent in 1985, and 4.88 percent by the year 2005 under alternative II-A, and 2.88 percent in 1985 and 5.13 percent by the year 2005 under alternative II-B, result from the assumption that the cost of institutional health care will continue to increase at a higher rate than taxable earnings. (See appendix A for a description of the methodology and assumptions used in these projections.)

The allowances necessary to build the trust fund to the level of a half year's disbursements and to maintain it at that level, after accounting for the offsetting effect of interest earnings, are also shown in table 8. Because of the $12.4 billion loan to the old age and survivor insurance fund in 1982, the HI fund is well below the desired level. Additional financing would be required immediately to begin building the trust fund to the level of a half year's disbursements. For purposes of display in table 8, the allowance for trust fund building is assumed over a 10 year period and after that the allowance is solely for maintaining the trust fund at the 50 percent level.

The adequacy of the financing of the hospital insurance program under current law is measured by comparing on a year-by-year basis the actual tax rates specified by law with the corresponding total costs of the program, expressed as percentages of taxable payroll. If these two items are exactly equal in each year of the 25-year projection period and all projections assumptions are realized, tax revenues along with interest income will be sufficient to provide for benefits and administrative expenses for insured persons and to build the trust fund and maintain it at the level of one-half year's expenditures. In practice, however, tax rate schedules generally are designed with rate changes occurring only at intervals of several years, rather than with continual yearly increases to match exactly with projected cost increases. To the extent that small differences between the yearly costs of the program and the corresponding tax rates occur for short periods of time and are offset by subsequent differences in the reverse direction, the substance of the financing objectives will have been met.

The projected total costs of the program under alternatives II-A and II-B expressed as percentages of taxable payroll, and the tax rates scheduled under current law are shown in table 8 for selected years over the 25-year period 1983-2007. The total cost of the program including expenditures, and trust fund building and maintenance, exceeds the tax rate in every year in both projections. Furthermore, expenditures for benefits and administrative expenses alone exceed the corresponding tax rates for all years. The trust fund as a percent of a year's disbursements under alternate II-A is projected to remain at a level between 20 and 35 percent through the remainder of this decade and then decline rapidly until it is completely exhausted in 1991. Under alternative II-B the trust fund is projected to remain fairly constant around 20 percent until 1988 and then decline rapidly until it is completely exhausted in 1990.

The actuarial balance of the hospital insurance program is defined to be the excess of the average tax rate for the 25-year valuation period over the average cost of the program, expressed as a percent of taxable payroll, for the same period. The average tax rate for the 25-year period 1983-2007 is 2.87 percent. The average cost to the program under alternative II-A is 3.97 percent of taxable payroll, composed of 3.89 percent for program expenditures and .08 percent for building and maintenance of the trust fund. The average cost of the program under alternative II-B is 4.11 percent of taxable payroll, composed of 4.02 percent for program expenditures and .09 percent for building and maintenance of the trust fund. The resulting actuarial balances, as shown in table 9, are a deficit of 1.10 percent and 1.24 percent of taxable payroll for alternatives II-A and II-B, respectively.

Long-range cost estimates for the hospital insurance program have been made, since the beginning of the program, for the 25-year period beginning with the year of the report. A relatively long valuation period, such as 25 years, is necessary in order to depict the pattern of rising costs which will ensue. Even a valuation period as long as 25 years fails to present fully the future contingencies that reasonably may be expected, such as the impact of the demographic shift after the turn of the century which is discussed in the old-age, survivors, and disability insurance report. On the other hand, the degree of uncertainty concerning future hospital payments, relative to the remainder of the economy, is sufficiently great as to limit the usefulness of projections beyond 25 years. A precise prediction of the future is not possible, even in the short range; however, both short- and long-range estimates can be made, based on reasonable assumptions, which will indicate the trend and general range of future costs.

Since future economic, demographic, and health care usage and cost experience may differ considerably from either set of intermediate assumptions on which the cost estimates were based, projections also have been prepared on the basis of two alternative sets of assumptions. The estimated operations of the hospital insurance trust fund during calendar years 1982-96 are summarized in table 10 for all four alternatives, and table 11 compares the actuarial balance under each of the four. The assumptions underlying alternatives II-A and II-B, the intermediate projections, are presented in substantial detail in appendix A. The assumptions used in preparing alternative projections I and III are also summarized in appendix A. The projections shown in the statement of expected operations and status of the trust fund through December 31, 1985, contained earlier in this report, are based on the assumptions contained in alternatives II-A and II-B.

The four alternative sets of assumptions were selected in order to indicate the general range in which the cost of the program reasonably might be expected to fall. The alternative I assumptions are somewhat more optimistic than both alternative II assumptions, resulting in a lower average cost over the 25-year period and a stronger trust fund development. Alternatives I and III provide for a fairly wide range of possible experience. Actual experience reasonably may be expected to fall within the range, but no guarantee can be made that this will be the case, particularly in light of the wide variations in experience that have occurred since the beginning of the program. The projected trust fund development under alternative III also provides a measure of the strength of the financing of the program. An adequate financing schedule ought to be sufficiently strong to withstand, for a period of several consecutive years, conditions in the general economy and in the hospital sector which are substantially more adverse than anticipated under either alternative II-A or alternative II-B.

Under alternative II-A and alternative II-B, the trust fund as a percent of a year's disbursements is projected to remain around 20 to 30 percent until the late 1980's and then decline rapidly until it is completely exhausted in about 1991 and 1990, respectively. Under alternative

I, the trust fund is projected to grow until about 1988, then to decline steadily until the fund is completely exhausted in 1996. Under alternative III, the trust fund as a percent of a year's disbursements is projected to decrease with complete exhaustion of the fund by 1988. These projections do not reflect any reduction in disbursements due to proposed changes in regulations which were included in the 1984 Federal Budget but which have not been implemented.

The divergence in outcomes among the four alternatives is reflected both in the estimated operations of the trust fund and in the 25-year average costs. The variations in the underlying assumptions, as shown in appendix A, can be characterized as (1) moderate in terms of magnitude of the differences on a year-by-year basis and (2) persistent over the duration of the 25-year period. Under both sets of intermediate assumptions, program costs are projected to grow at a rate which gradually declines to an ultimate level of approximately 2 1/2 percent more rapidly than taxable payroll. Under alternative I, program costs are projected to grow at a somewhat lower rate which gradually declines to an ultimate difference of about 1/2 percent. Similarly, alternative III follows a pattern whereby program costs initially increase at a somewhat higher rate, gradually declining to an ultimate difference of about 4 1/2 percent. Recent experience has indicated that economic conditions producing results as adverse as those under alternative III can occur. In view of this and because of the wide range of possible experience, it is important that a substantial balance be maintained in the hospital insurance trust fund as a reserve for contingencies.

TABLE 8.--COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL

Calendar Year	Expenditures under the program 1/	Trust fund building and maintenance 2/	Total cost of the program	Tax rate scheduled in the law 3/	Differ
Historical Data:					
1967	0.94%				
1968	1.04				
1969	1.12				
1970	1.20				
1971	1.32				
1972	1.30				
1973	1.33				
1974	1.42				
1975	1.69				
1976	1.83				
1977	1.95				
1978	2.02				
1979	1.99				
1980	2.19				
1981	2.41				
1982	2.69				
Projection:					
Alternative II-A					
1983	2.77 5/	0.08%	2.85%	2.60%	-0.25%
1984	2.75	0.10	2.85	2.60	-0.25
1985	2.85	0.11	2.96	2.70	-0.26
1990	3.36	0.14	3.50	2.90	-0.60
1995	3.93	0.06	3.99	2.90	-1.09
2000	4.40	0.05	4.45	2.90	-1.55
2005	4.88	0.05	4.93	2.90	-2.03
Average 4/	3.89	0.08	3.97	2.87	-1.10
Alternative II-B					
1983	2.77 5/	0.08	2.85	2.60	-0.25
1984	2.77	0.11	2.88	2.60	-0.28
1985	2.88	0.11	2.99	2.70	-0.29
1990	3.46	0.14	3.60	2.90	-0.70
1995	4.05	0.06	4.11	2.90	-1.21
2000	4.58	0.06	4.64	2.90	-1.74
2005	5.13	0.06	5.19	2.90	-2.29
Average 4/	4.02	0.09	4.11	2.87	-1.24

1/ Costs attributable to insured beneficiaries only. Benefits and administrative costs for noninsured persons are financed through general revenue transfers and premium payments rather than through payroll taxes. Gratuitous credits for military service after 1956 are included in taxable payroll.

2/ Allowance for building and maintaining the trust fund balance at the level of a half year's outgo after accounting for the offsetting effect of interest earnings.

3/ Rates for employees and employers combined.

4/ Average for the 25-year period 1983-2007.

5/ Gratuitous credits for military service before 1984 were attributed to the year in which such service had occurred. If all such credits had been attributed to 1983, expenditures under the program in 1983 would have been lower by .19 percent of taxable payroll.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

TABLE 9.--ACTUARIAL BALANCE OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL

	Alternative II-A	Alternative II-B
Average contribution rate, scheduled under present law*	2.87%	2.87%
Average cost of the program:*		
Expenditures, for benefit payments and administrative costs for insured beneficiaries	3.89	4.02
Building and maintaining the trust fund, at the level of one-half year's expenditures	.08	.09
Total cost of the program	3.97	4.11
Actuarial balance	-1.10%	-1.24%

* Average for the 25-year period 1983-2007.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

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TABLE 10.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1982-96, UNDER ALTERNATIVE SETS OF ASSUMPTIONS
(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Interfund borrowing transfers 1/	Net increase in fund	Fund at end of year	Ratio of assets to disbursements 2/ (percent)
			ALTERNATIVE I			
1982 3/	$38.0	$ 36.1	$-12.4	$-10.6	$ 8.2	52
1983	44.8	41.2		3.6	11.8	20
1984	46.0	46.2	1.0	0.9	12.6	26
1985	52.0	51.1	1.6	2.5	15.2	25
1986	59.1	55.7	9.1	12.5	27.6	27
1987	63.6	60.5	0.7	3.8	31.4	46
1988	68.0	65.9		2.1	33.5	48
1989	71.9	70.8		1.1	34.6	47
1990	76.8	77.1		-0.4	34.2	45
1991	80.8	82.4		-1.6	32.6	42
1992	86.1	89.1		-3.1	29.5	37
1993	90.1	95.8		-5.7	23.9	31
1994	95.3	102.8		-7.6	16.3	23
1995	99.4	110.2		-10.8	5.5	15
1996	104.5	117.6		-13.2	4/	5
			ALTERNATIVE II-A			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.6	11.7	20
1984	45.8	46.5	0.6	-0.1	11.6	25
1985	51.3	51.8		-0.5	11.2	22
1986	58.2	57.1	4.8	5.9	17.1	20
1987	61.9	62.6	6.8	6.1	23.2	27
1988	65.7	68.9	0.2	-3.0	20.3	34
1989	69.8	75.8		-6.0	14.3	27
1990	73.9	83.5		-9.6	4.7	17
1991	77.5	91.5		-14.0	5/	5
			ALTERNATIVE II-B			
1982 3/	38.8	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.5	11.7	20
1984	45.6	46.6	0.5	-0.5	11.2	25
1985	51.3	52.3		-1.0	10.2	21
1986	58.4	58.0	1.1	1.5	11.8	18
1987	62.5	64.1	2.4	0.8	12.6	18
1988	66.0	71.0	8.4	3.5	16.1	18
1989	70.0	78.4		-8.4	7.8	21
1990	73.9	86.6		-12.6	6/	9
			ALTERNATIVE III			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.4	41.2		3.2	11.4	20
1984	44.5	46.8		-2.3	9.1	24
1985	50.5	54.1		-3.6	5.5	17
1986	58.2	61.9		-3.7	1.8	9
1987	62.6	70.5	12.4	4.5	6.3	3
1988	66.5	80.4		-13.9	7/	8

1/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted from the HI fund balance. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

2/ Ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

3/ Figures for 1982 represent actual experience.

4/ Trust fund depleted in calendar year 1996.

5/ Trust fund depleted in calendar year 1991.

6/ Trust fund depleted in calendar year 1990.

7/ Trust fund depleted in calendar year 1988.

NOTE: Totals do not necessarily equal the sum of rounded components.

TABLE 11.--ACTUARIAL BALANCE OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

	Alternative			
	I	II-A	II-B	III
Average contribution rate, scheduled under present law 1/	2.87%	2.87%	2.87%	2.87%
Average cost of the program, for expenditures and for trust fund building and maintenance 2/	3.21	3.97	4.11	5.38
Actuarial balance	-0.34	-1.10	-1.24	-2.51

1/ Average for the 25-year period 1983-2007.

2/ Average for the 25-year period 1983-2007, expressed as a percent of taxable payroll.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

CONCLUSION

The necessity to lend $12.4 billion (nearly sixty percent of the assets of the Federal Hospital Insurance Trust Fund) to the Federal Old Age and Survivors Insurance Trust Fund in December 1982 has substantially reduced the reserves available to absorb fluctuations in the experience of the hospital insurance trust fund. The assets on hand, expressed as a percent of outgo during the year, have been reduced from 50% at the beginning of calendar year 1982 to 20% at the beginning of calendar year 1983, which is far below the 50% level recommended by the Board of Trustees.

The assets of the OASI Trust Fund are projected to increase sufficiently to allow complete repayment of the $12.4 billion loan before the projected depletion of the HI Trust Fund. However, the reduction in reserve levels makes the hospital insurance trust fund more vulnerable to even temporary deviations in actual experience from the projections. Thus, even though the hospital insurance trust fund is expected to be able to pay benefits and administrative expenses as they become due until 1990 under the alternative II-B assumptions and until 1991 under the alternative II-A assumptions, any significant adverse deviation from these projections could result in the inability of the fund to meet its obligations much sooner than projected.

Despite the short-term uncertainties regarding the ability of the trust fund to meet its obligations, the enactment of the Tax Equity and Fiscal Responsibility Act (Public Law 97-248) in 1982 and the Social Security Financing Amendments (Public Law 98-21) in 1983 has substantially reduced the long-range deficit of the HI fund, and, more importantly, the prospective payment provisions of Public Law 98-21 have made the outlays of the hospital insurance program potentially less vulnerable to excessive rates of growth in the hospital industry by providing the Secretary of Health and Human Services with some discretion over the level of payments to hospitals. It is difficult to anticipate the level of discretion which the Secretary of Health and Human Services will exercise over the 25-year projection period in determining payments to hospitals. However, the projections in this report indicate that, even assuming reasonable use of this new discretionary authority, the present financing schedule for the hospital insurance trust fund is inadequate to provide for the expenditures anticipated over the entire 25-year valuation period if the assumptions underlying the estimates are realized. Tax rates currently specified in the law (including the scheduled increases in 1985 and 1986) are sufficient, along with interest earnings and assets in the fund, to support program expenditures only over the next six to seven years. The financing for the remainder of the 25-year valuation period is not sufficient to provide for projected benefits and administrative expenses. The average tax rate necessary to provide for benefits and administrative expenses plus build the fund to a level of a half year's disbursements exceeds the average tax rate scheduled in the law, producing an average deficit of 1.24 percent of taxable payroll under alternative II-B and 1.10 percent under alternative II-A over the entire 25-year projection period. In order to bring the hospital insurance program into close actuarial balance, either outlays will have to be reduced by 30 percent or income increased by 43 percent.

The quadrennial Advisory Council on Social Security, appointed by the Secretary, will be addressing the financial status of the Federal Hospital Insurance Trust Fund. The Council's report is due by the end of 1983. The Board recommends that Congress study carefully the Advisory Council's recommendations as it takes further action to curtail the rapid growth in the cost of the hospital insurance program which has occurred in recent years and which is anticipated in the future.

APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR THE HOSPITAL INSURANCE COST ESTIMATES*

The basic methodology and assumptions for alternative II-A and alternative II-B used in the estimates for the hospital insurance program are described in this appendix. These alternatives reflect two different levels of expectation of future performance of the economy. In addition, sensitivity testing of program costs under alternative sets of assumptions is presented.

1. PROGRAM COSTS

The principal steps involved in projecting the future costs of the hospital insurance program are (1) establishing the present cost of services provided to beneficiaries, by type of service, to serve as a projection base; (2) projecting increases in payment amounts for inpatient hospital services admissions under the program; (3) projecting increases in the cost of skilled nursing facility and home health agency services covered under the program; and (4) projecting increases in administrative costs. The major emphasis will be directed toward expenditures for inpatient hospital services, which account for approximately 95 percent of total benefits.

a. Projection Base

Beginning with hospital accounting years starting on or after October 1, 1983, the hospital insurance program will discontinue reimbursing hospitals on the basis of reasonable cost, and will begin making prospectively determined payments to hospitals for admissions covered under the program. The payment rate for each admission will depend upon the Diagnosis Related Group (DRG) to which the admission belongs.

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* Prepared by the Division of Medicare Cost Estimates, Bureau of Data Management and Strategy, Health Care Financing Administration

The transition from the cost-based system to the prospective payment system will be phased in over a period of four years. During the first two years of this period, the law requires that payments to hospitals, in the aggregate, be no more or less than they would have been under the reasonable cost reimbursement system. Thus, program costs during the first two years are estimated on the basis of the reasonable cost reimbursement system. In order to establish a suitable base from which to project the future costs of the program, the incurred reasonable cost of services provided must be reconstructed for the most recent period for which a reliable determination can be made. To do this, payments to providers must be attributed to dates of service, rather than to payment dates. In addition, the nonrecurring effects of any changes in regulations or administration of the program and of any items affecting only the timing and flow of payments to providers must be eliminated. As a result, the rates of increase in the incurred cost of the program differ from the increases in cash disbursement shown in tables 5 and 6.

The reasonable costs of covered services to beneficiaries are determined on the basis of provider cost reports. Payments to a provider initially are made on an "interim" basis; to adjust interim payments to the level of retroactively determined costs, a series of payments or recoveries is effected through the course of cost settlement with the provider. The net amounts paid to date to providers in the form of cost settlements are known; however, the incomplete data available do not permit a precise determination of the exact amounts incurred during specific periods of time. Due to the time required to obtain cost reports from providers, to verify these reports, and to perform audits (where appropriate), final settlements have lagged behind the liability for such payments or recoveries by as much as several years for some providers. Hence, the final cost of the program has not been completely determined for the most recent years of the program, and some degree of uncertainty remains even for earlier years.

Additional problems are posed by changes in administrative or reimbursement policy which have a substantial effect on either the amount or incidence of payment. The extent and timing of the incorporation of such changes into interim payment rates and cost settlement amounts cannot be determined precisely.

The process of allocating the various types of payments made under the program to the proper incurred period--using incomplete data and estimates of the impact of administrative actions--presents difficult problems, the solution to which can be only approximate. Under the circumstances, the best that can be expected is that the actual incurred cost of the program for a recent period can be estimated within a few percent. This increases the projection error directly, by incorporating any error in estimating the base year into all future years.

b. Payments for Inpatient Hospital Costs

Beginning with hospital accounting years starting on or after October 1, 1983, the hospital insurance program will pay participating hospitals a prospectively determined amount for providing covered services to beneficiaries. The payment rate for each admission will depend upon the DRG to which the admission belongs.

For hospital accounting years beginning on or after October 1, 1985, the increase in the payment rate for each hospital admission is determined by the Secretary of Health and Human Services, with the advice of the Prospective Payment Assissment Commission, a special commission to be appointed to study and make recommendations with regard to the level of payments to hospitals. The law contemplates that the annual increase in the payment rate for each admission will be related to a hospital input price index, which measures the increase in prices for goods and services purchased by hospitals for use in providing care to hospital inpatients. It is anticipated that in most years the Secretary will recommend an increase in payment per admission equal to one percent plus the increase in the hospital input price index, although the law provides that the Secretary may select an alternative increase. Thus, the projections contained in this report are based on the assumption that for hospital accounting periods beginning on or after October 1, 1985, program payments to participating hospitals for each covered admission will be increased by one percent plus the increase in the hospital input price index.

Increases in aggregate payments for inpatient hospital care covered under the hospital insurance program can be analyzed into four broad categories:

(1) Labor factors - the increase in the hospital input price index which is attributable to increases in hospital workers' hourly earnings;

(2) Non-labor factors - the increase in the hospital input price index which is attributable to factors other than hospital workers' hourly earnings, such as the costs of energy, food, and supplies;

(3) Unit input intensity allowance - the increase in inpatient hospital costs per admission which are in excess of those attributable to increases in the hospital input price index; and

(4) Volume of services - the increase in total output of units of service (as measured by hospital admissions covered by the hospital insurance program).

It has been possible to isolate some of these elements and to identify their roles in previous hospital cost increases. Table A1 shows the values of the principal components of the increases for historical periods for which data are available and the projected trends used in the estimates. The following discussions apply to projections under both alternative II-A and alternative II-B unless otherwise indicated.

Increases in hospital workers' hourly earnings can be analyzed and projected in terms of the assumed increases in average wages in covered employment which underly the projections of contribution income for the hospital insurance trust fund. Two factors account for the difference between increases in hospital workers' hourly earnings and wages in covered employment: (1) fluctuations in the general economy in average hours worked per year and (2) differences between hourly earnings increases in the general economy and in the hospital industry.

Increase in average wages in covered employment and average hourly earnings have generally moved together. However, the relationship has been affected by a long term trend towards fewer hours worked per year, as well as by fluctuations in the unemployment rate, with larger increases in the excess of hourly earnings over average wages generally associated with periods of high unemployment. This relationship is projected to continue. Hourly earnings and average wages in covered employment are generally projected to increase together with only slight deviations during the early years of the projection period.

For at least a decade preceding the beginning of the hospital insurance program, hospital workers' hourly earnings increased at a rate about 1.5 percent per year more rapidly than the rate of increase in the general economy. Since the beginning of the hospital insurance program, this differential has fluctuated widely, but has averaged between 1.5 and 2 percent. Several factors contributing to this differential can be identified, including (1) growth in third-party reimbursement of hospitals - through Medicare, Medicaid, and comprehensive private plans - which is likely to have weakened hospital resistance to wage demands; (2) increased proportions of highly trained and more highly paid personnel; (3) an increased degree of labor organization and activity; and (4) the fact that hospital employees have historically earned less than similarly skilled workers in other industries. Over the short term, this differential is assumed to taper gradually to a modest level, eventually declining to zero near the end of the twenty-five year projection period.

Increases in hospital price input intensity, which are primarily the result of price increases for goods and services that hospitals purchase which do not parallel increases in the Consumer Price Index (CPI), are measured as the difference between the non-labor component of the hospital input price index and the CPI. For the ten years preceding the beginning of the hospital insurance program, hospital price input intensity averaged slightly more than one percent annually. Although the level has fluctuated erratically since the hospital insurance program began, the long term average has remained at about the same general level as before the program began, averaging about 1.2 percent during the last ten years. Hospital price input intensity is expected to rise slightly above the average level during calendar years 1983 and 1984, remain slightly over one percent through the year 2000, and decline to about one-half percent during the last few years of the projection period.

It is contemplated that future increases in payments to participating hospitals for covered admissions will be equal to one percent plus the increase in the hospital input price index. Thus, the unit input intensity allowance, as indicated in table A1, is assumed to equal one percent in all future years. However, it should be noted that the level of the unit input intensity allowance is completely within the discretion of the Secretary of Health and Human Services and could vary significantly from the assumed value from year to year. For historical years, the unit input intensity allowance has been set at one percent for illustrative purposes, with historical increases in excess of one percent allocated to other sources. During the projection period, increases in inpatient hospital payments in any one year from other sources are expected to be small, except during 1984, 1985, and early 1986 when the requirement that prospective payment rates be set at a level which neither decreases nor increases aggregate payments to hospitals will have a substantial impact on the payment level. The long term average increase from other sources is expected to be close to zero. Under the prospective payment method, possible other sources of both relative increases and decreases in payments include (1) a shift to more or less expensive admissions (diagnosis related groups) due to changes in the demographic characteristics of the covered population and (2) adjustments in the relative payment levels for various diagnosis related groups or addition/deletion of diagnosis related groups in response to changes in technology. As experience under the prospective payment system develops and is analyzed, it may be possible to establish a predictable trend for this component.

Other factors which contribute to increases in payments for inpatient hospital services include increases in units of service as measured by increases in inpatient hospital admissions covered under the hospital insurance program. Increases in admissions are attributable both to increases in enrollment under the hospital insurance program and to increases in admission incidence (admissions per beneficiary). The projection assumes, over the long range, changes in both enrollment and admission incidence only due to the effects of demographic shifts in the population. The historical and projected increases in enrollment reflect the more rapid increase in the population aged 65 and over than in the total population of the United States, and beginning in mid-1973, the coverage of certain disabled beneficiaries and persons with end-stage renal disease. Increases in the enrollment are expected to continue, reflecting a continuation of the demographic shift into categories of the population which are eligible for hospital insurance protection. In addition, increases in the average age of beneficiaries lead to higher levels of admission incidence.

c. Skilled Nursing Facility and Home Health Agency Costs

Historical experience with the number of days of care covered in skilled nursing facilities under the hospital insurance program has been characterized by wide swings. The number of covered days dropped very sharply in 1970 and continued to decline through 1972. This was the result of strict enforcement of regulations separating skilled nursing from custodial care. Because of the small fraction of nursing home care covered under the program, this reduction primarily reflected the determination that Medicare was not liable for payment rather than reduced usage of services. The 1972 amendments extended benefits to persons who require skilled rehabilitative services regardless of their need for skilled nursing services (the former prerequisite for benefits). This change and subsequent related changes in regulations have resulted in significant increases in the number of services covered by the program. Recent data has indicated a decline in utilization of these services through 1980. Only modest increases are projected in skilled nursing utilization thereafter.

Increases in the average cost per day in skilled nursing facilities under the program are caused principally by increasing payroll costs for nurses and other skilled labor required. Projected rates of increase are assumed to be about the same as increases in general wages throughout the 25-year projection period. The resulting increases in the cost of skilled nursing facility services are shown in table A2.

Program experience with home health agency costs has shown a generally upward trend. The number of visits has fluctuated somewhat from year to year, with very sharp increases appearing in the last four years. Relatively large increases are assumed for the next few years, followed by a projected pattern of increases similar to that for skilled nursing facilities. Cost per service is assumed to increase at about the same rate as increases in general wages. The resulting home health agency cost increases are shown in table A2.

d. Administrative Expenses

The costs of administering the hospital insurance program have remained relatively small, in comparison with benefit amounts, throughout the history of the program. The ratio of administrative expenses to benefit payments has generally fallen within the range of 1 to 3 percent. The short-range projection of administrative cost is based on estimates of workloads and approved budgets for intermediaries and the Health Care Financing Administration. In the long range, administrative cost increases are based on assumed increases in workloads, primarily due to growth and aging of the population, and on assumed unit cost increases of 2 percent less than the increases in average wages shown in table A1.

2. FINANCING

In order to analyze costs and to evaluate the financing of a program supported by payroll taxes, program costs must be compared on a year-by-year basis with the taxable payroll which provides the source of income for these costs. Since the vast majority of total program costs are related to insured beneficiaries and since general revenue appropriations and premium payments are available to support the uninsured segments, the remainder of this report will focus on the financing for insured beneficiaries.

a. Taxable Payroll

Taxable payroll increases can be separated into a part due to increases in covered wages and a part due to increases in the number of covered workers. The taxable payroll projection used in this report is based on assumptions consistent with those used in projecting experience under the OASDI program. Increases in taxable payroll assumed for this report are shown in table A2.

b. Relationship Between Program Costs and Taxable Payroll

The single most meaningful measure of program cost increases, with reference to the financing of the system, is the relationship between program cost increases and taxable payroll increases. If the rates of increase in both series are the same, a level tax rate over time will be adequate to support the program. However, to the extent that program costs increase more rapidly than taxable payroll, a schedule of increasing tax rates will be required to finance the system over time. Table A2 shows the resulting increases in program costs relative to taxable payroll over the 25-year projection period. These relative increases reduce gradually to an ultimate level of approximately 2.1 and 2.3 percent per year for alternatives II-A and II-B, respectively. The result of these increases over the duration of the projection period is a continued increase in the year-by-year ratios of program expenditures to taxable payroll, as shown in table A3.

3. SENSITIVITY TESTING OF COSTS UNDER ALTERNATIVE ASSUMPTIONS

Over the past 20 years, aggregate inpatient hospital costs for Medicare beneficiaries have increased substantially faster than increases in average wages and prices in the general economy. Table A1 shows the experience of the HI program over the past 11 years. As mentioned earlier, the HI program will make payments to hospitals in the future on a prospective basis. The prospective payments provisions as passed by Congress have made the outlays of the HI program potentially less vulnerable to excessive rates of growth in the hospital industry. Thus, the trends in aggregate HI inpatient hospital costs shown in the historical section of table A1 have little relation to the projected HI inpatient hospital payments. However, there is some uncertainty in projecting HI expenditures due to the uncertainty of the underlying economic assumptions and utilization increases. In addition, there is some uncertainty in projecting HI inpatient hospital payments due to the Secretary of Health and Human Services' discretion in setting the payment levels to hospitals.

In view of the uncertainty of future cost trends, projected costs for the hospital insurance program have been prepared under four alternative sets of assumptions. A summary of the assumptions and results is shown in table A3. The sets of assumptions labeled "Alternative II-A and Alternative II-B" form the basis for the detailed discussion of hospital cost trends and resulting program costs presented throughout this report. They represent intermediate sets of cost increase assumptions, compared with the lower cost and more optimistic alternative I and the higher cost and less optimistic alternative III. Increases in the economic factors (average wages and CPI) for the four alternatives are consistent with those underlying the OASDI report.

As noted earlier, the single most meaningful measure of hospital insurance program cost increases, with reference to the financing of the system, is the relationship between program cost increases and taxable payroll increases. The extent to which program cost increases exceed increases in taxable payroll will determine how steeply tax rates must increase to finance the system over time.

Under both sets of intermediate assumptions, program costs are projected ultimately to increase slightly more than 2 percent faster than increases in taxable payroll. Program expenditures, which are currently about 2 3/4 percent of taxable payroll, increase to a level of about 5 percent by the year 2005 under both alternatives II-A and II-B. Hence, if all of the projection assumptions are realized over time, hospital insurance tax rates by the end of the 25-year period will have to be substantially higher than those provided in the present financing schedule (2.9 percent of taxable payroll, for 1986 and later).

Alternatives I and III contain assumptions which result in program costs increasing, relative to taxable payroll increases, approximately 2 percent less rapidly and 2 percent more rapidly, respectively, than the results under both sets of intermediate assumptions. Under alternative I, program costs ultimately increase .4 percent more rapidly than increases in taxable payroll. By the year 2005, program expenditures under this alternative would be about 3.4 percent of taxable payroll. Hence, hospital insurance tax rates required by the end of the valuation period would be greater than those currently scheduled, even under the optimistic alternative I assumptions. Under alternative III, program costs ultimately increase 4.3 percent more rapidly than increases in taxable payroll. The result of this differential is a level of program expenditures in the year 2005 which is 7.7 percent of taxable payroll, about 4.8 percent higher than the 2.9 percent tax rate currently scheduled.

TABLE A1.--COMPONENTS OF HISTORICAL AND PROJECTED INCREASES IN HI INPATIENT HOSPITAL PAYMENTS
(Percent)

	Labor				Non-Labor					Units of Service			
Calendar Year	Wages in Covered Employment	Hours Worked Per Year & Other Factors	Hospital Hourly Earnings Level	Hospital Hourly Earnings	CPI	Hospital Price Input Intensity	Non-Labor Hospital Prices	Input Price Index	Unit Input Intensity Allowance	HI Enrollment	Admission Incidence	Other Sources	HI Inpatient Hospital Costs
Historical Data:													
1972	7.3%	-0.8%	0.4%	6.8%	3.3%	1.2%	4.5%	5.9%	1.0%	1.6%	3.0%	-0.9%	10.9%
1973	6.9	-0.7	-0.7	5.5	6.2	1.7	8.0	6.5	1.0	6.2	-2.4	4.5	16.4
1974	7.4	0.6	-0.3	7.7	11.0	2.9	14.2	10.4	1.0	6.6	8.7	-4.2	23.6
1975	6.6	1.6	1.5	9.9	9.1	2.8	12.2	10.9	1.0	3.2	1.4	4.6	22.5
1976	8.2	-0.9	0.9	8.2	5.8	2.4	8.3	8.2	1.0	2.9	0.8	5.1	19.0
1977	8.0	-0.5	-0.4	7.1	6.5	1.3	7.9	7.4	1.0	3.0	1.4	3.6	17.3
1978	8.2	0.0	0.2	8.4	7.6	0.3	7.9	8.2	1.0	2.7	1.2	1.2	14.8
1979	8.8	-0.7	0.4	8.4	11.1	0.0	11.1	9.6	1.0	2.7	1.7	0.8	16.4
1980	8.6	0.4	1.5	10.6	13.5	-0.6	12.8	11.6	1.0	2.1	4.7	-0.1	20.3
1981	8.8	0.3	2.9	12.3	10.2	0.8	11.1	11.8	1.0	1.8	3.0	2.8	21.6
1982	5.6	1.2	3.8	11.0	6.0	0.9	7.0	9.3	1.0	2.0	2.3	2.2	17.6
Projection:													
Alternative II-A													
1983	4.3	1.0	1.8	7.2	2.7	1.4	4.1	5.9	1.0	1.4	1.3	3.1	13.2
1984	5.0	1.0	1.8	7.9	3.6	1.8	5.5	6.9	1.0	2.0	0.9	1.3	12.4
1985	4.8	0.6	1.8	7.3	4.0	1.3	5.4	6.5	1.0	1.8	1.1	0.6	11.3
1986	5.1	0.2	1.8	7.2	3.6	1.3	4.9	6.3	1.0	1.9	1.1	0.0	10.5
1987	5.2	0.2	1.8	7.3	3.2	1.2	4.4	6.1	1.0	2.0	1.0	0.1	10.4
1988	5.0	0.2	1.8	7.1	3.0	1.2	4.2	6.0	1.0	1.9	1.1	0.0	10.2
1989	5.3	0.2	1.3	6.9	3.0	1.2	4.2	5.9	1.0	1.8	1.2	0.0	10.1
1990	5.5	0.2	1.3	7.1	3.0	1.2	4.2	6.0	1.0	1.8	1.2	0.0	10.2
1995	5.0	0.0	1.0	6.1	3.0	1.0	4.0	5.4	1.0	1.2	1.3	0.0	9.1
2000	5.0	0.0	0.5	5.5	3.0	1.0	4.0	5.0	1.0	0.8	1.3	0.1	8.3
2005	5.0	0.0	0.0	5.0	3.0	0.5	3.5	4.5	1.0	1.2	1.0	0.0	7.8
Alternative II-B													
1983	4.6	1.0	1.8	7.6	3.1	1.4	4.5	6.3	1.0	1.4	1.3	2.7	13.2
1984	4.6	1.0	1.8	7.5	4.4	1.8	6.3	7.0	1.0	2.0	0.9	1.3	12.6
1985	5.5	0.6	1.8	8.0	5.3	1.3	6.7	7.5	1.0	1.8	1.1	0.6	12.4
1986	5.6	0.2	1.8	7.7	4.8	1.3	6.2	7.1	1.0	1.9	1.1	0.0	11.4
1987	5.7	0.2	1.8	7.8	4.4	1.2	5.7	6.9	1.0	2.0	1.0	0.0	11.2
1988	5.4	0.2	1.8	7.5	4.1	1.2	5.3	6.6	1.0	1.9	1.1	0.0	10.9
1989	5.4	0.2	1.3	7.0	4.0	1.2	5.2	6.3	1.0	1.8	1.2	0.0	10.5
1990	5.6	0.2	1.3	7.2	4.0	1.2	5.2	6.4	1.0	1.8	1.2	0.0	10.6
1995	5.5	0.0	1.0	6.6	4.0	1.0	5.0	6.0	1.0	1.2	1.3	0.0	9.7
2000	5.5	0.0	0.5	6.0	4.0	1.0	5.0	5.6	1.0	0.8	1.3	0.1	8.9
2005	5.5	0.0	0.0	5.5	4.0	0.5	4.5	5.2	1.0	1.2	1.0	0.1	8.6

TABLE A2.--RELATIONSHIP BETWEEN INCREASES IN TOTAL HI PROGRAM COSTS AND INCREASES IN TAXABLE PAYROLL 1/
(Percent)

Calendar year	Inpatient hospital 2/	Skilled nursing facility 3/	Home health agency 3/	Weighted average	HI administrative costs 3/	Total HI program costs 3/	HI taxable payroll	Ratio of costs to payroll 4/
Alternative II-A								
1983	13.7%	9.7%	19.5%	13.9%	4.2%	13.8%	10.4%	3.0%
1984	12.3	8.0	13.4	12.6	6.3	12.6	12.7	-0.1
1985	11.5	9.5	11.4	11.6	5.9	11.5	7.6	3.7
1990	10.3	8.6	8.7	10.3	6.7	10.2	6.4	3.6
1995	9.1	7.0	7.2	9.1	5.7	9.0	5.8	3.0
2000	8.3	6.5	6.7	8.3	5.2	8.2	6.1	2.1
2005	7.9	6.1	6.5	7.8	5.2	7.8	5.6	2.1
Alternative II-B								
1983	13.7	9.7	19.5	13.9	4.2	13.8	10.4	3.0
1984	12.5	7.8	13.4	12.8	5.9	12.7	12.0	0.6
1985	12.6	9.5	11.4	12.6	6.6	12.5	8.2	4.0
1990	10.8	8.7	8.6	10.6	6.7	10.6	6.5	3.9
1995	9.8	7.5	7.6	9.7	6.1	9.6	6.2	3.3
2000	8.9	6.9	7.2	8.9	5.7	8.8	6.5	2.2
2005	8.6	6.7	7.0	8.5	5.8	8.5	6.1	2.3

1/ Percent increase in year indicated over previous year.

2/ This column differs slightly from the last column of table A1, since table A1 includes all persons eligible for HI protection while this table excludes noninsured persons.

3/ Costs attributable to insured beneficiaries only. Benefits and administrative costs for noninsured persons are financed through general revenue transfers and premium payments rather than through payroll taxes.

4/ Percent increase in the ratio of program expenditures to taxable payroll. This is equivalent to the differential between the increase in program costs and the increase in taxable payroll.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

TABLE A3.--SUMMARY OF ALTERNATIVE COST PROJECTIONS FOR THE HOSPITAL INSURANCE PROGRAM
(Percent)

	Increases in aggregate HI inpatient hospital payments 1/				Changes in the relationship between costs and payroll 1/			
Calendar year	Average wages	CPI	Other factors 2/	Total	Program costs 3/	Taxable payroll	Ratio of costs to payroll	Expenditures as a percent of taxable payroll
				ALTERNATIVE I				
1983	4.3%	2.5%	9.4%	13.2%	13.8%	10.6%	3.0%	2.76%
1984	5.2	3.3	6.8	11.5	11.7	13.2	-1.4	2.72
1985	5.3	3.7	5.6	10.5	10.8	8.5	2.1	2.77
1990	5.1	2.0	5.1	9.2	9.2	7.1	1.9	3.04
1995	4.5	2.0	3.6	7.2	7.2	5.7	1.3	3.24
2000	4.5	2.0	2.5	6.2	6.2	5.9	0.3	3.33
2005	4.5	2.0	2.0	5.7	5.7	5.2	0.4	3.40
				ALTERNATIVE II-A				
1983	4.3	2.7	9.2	13.2	13.8	10.4	3.0	2.77
1984	5.0	3.6	7.6	12.4	12.6	12.7	-0.1	2.75
1985	4.8	4.0	6.5	11.3	11.5	7.6	3.7	2.85
1990	5.5	3.0	5.4	10.2	10.2	6.4	3.6	3.36
1995	5.0	3.0	4.6	9.1	9.0	5.8	3.0	3.93
2000	5.0	3.0	3.8	8.3	8.2	6.1	2.1	4.40
2005	5.0	3.0	3.3	7.8	7.8	5.6	2.1	4.88
				ALTERNATIVE II-B				
1983	4.6	3.1	8.9	13.2	13.8	10.4	3.0	2.77
1984	4.6	4.4	7.7	12.6	12.7	12.0	0.6	2.77
1985	5.5	5.3	6.6	12.4	12.5	8.2	4.0	2.88
1990	5.6	4.0	5.4	10.6	10.6	6.5	3.9	3.46
1995	5.5	4.0	4.5	9.7	9.6	6.2	3.3	4.05
2000	5.5	4.0	3.8	8.9	8.8	6.5	2.2	4.58
2005	5.5	4.0	3.5	8.6	8.5	6.1	2.3	5.13
				ALTERNATIVE III				
1983	3.9	3.3	9.2	13.2	13.8	9.3	4.1	2.80
1984	4.6	6.4	7.6	13.4	13.4	10.6	2.6	2.86
1985	7.4	7.7	7.9	16.0	15.9	9.5	5.8	3.02
1990	6.2	5.0	7.3	13.5	13.3	7.2	5.7	3.96
1995	6.0	5.0	6.2	12.2	12.1	6.5	5.3	5.08
2000	6.0	5.0	5.5	11.4	11.3	6.9	4.1	6.29
2005	6.0	5.0	5.2	11.1	11.0	6.5	4.3	7.74

1/ Percent increase in the year indicated over the previous year.

2/ Other factors include hospital hourly earnings, hospital price input intensity, unit input intensity allowance and units of service as measured by admission.

3/ Includes cost attributable to insured beneficiaries only.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

APPENDIX B

SEVENTY-FIVE YEAR PROJECTIONS

Long-range cost estimates for the hospital insurance program have been made, since the beginning of the program, for a 25-year period. The degree of uncertainty concerning future HI program costs, relative to the remainder of the economy, is sufficiently great as to limit the usefulness of projections beyond 25 years. However, even a valuation period as long as 25 years fails to present fully the future contingencies that reasonably may be expected, such as the impact of the demographic shift after the turn of the century which is discussed in the OASDI report. The 75-year projections presented here give a general indication of the magnitude of the cost of financing the HI program during the next 75 years. Costs beyond the 25-year projection period are based upon the assumption that costs per unit of service will increase at the same rate as wages increase.

TABLE B1.--COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL

Calendar Year	Expenditures Under the Program 1/	Tax Rate Scheduled in the Law 2/	Difference
1983	2.77%	2.60%	-0.17%
1985	2.88	2.70	-0.18
1990	3.46	2.90	-0.56
1995	4.05	2.90	-1.15
2000	4.58	2.90	-1.68
2005	5.13	2.90	-2.23
2010	5.61	2.90	-2.71
2015	6.22	2.90	-3.32
2020	7.00	2.90	-4.10
2025	7.89	2.90	-4.99
2030	8.65	2.90	-5.75
2035	9.10	2.90	-6.20
2040	9.29	2.90	-6.39
2045	9.32	2.90	-6.42
2050	9.35	2.90	-6.45
2055	9.37	2.90	-6.47

1/ Costs attributable to insured beneficiaries only. Benefits and administrative expenses for noninsured persons are financed through general revenue transfers and premium payments rather than through payroll taxes.

2/ Rates for employers and employees combined.

APPENDIX C

DETERMINATION AND ANNOUNCEMENT OF THE INPATIENT HOSPITAL DEDUCTIBLE FOR 1983*

Under the authority in section 1831(b)(2) of the Social Security Act (42 U.S.C. 1395e(b)(2)), the Secretary has determined that the Medicare inpatient hospital deductible for 1983 will be $304.

Section 1813 provides for an inpatient hospital deductible and certain coinsurance amounts to be deducted from the amount payable by Medicare for inpatient hospital services and extended care services furnished an individual. Section 1813(b)(2) requires the Secretary of HHS to determine and publish, between July 1 and October 1 of each year, the amount of the inpatient hospital deductible applicable for the following calendar year.

Because the coinsurance amounts in section 1813 are fixed percentages of the inpatient hospital deductible for services furnished in the same calendar year, the increase in the deductible has the effect of also increasing the amount of coinsurance the Medicare beneficiary must pay. Thus, for inpatient hospital services or extended care services furnished in 1983, the daily coinsurance of the 61st through 90th days of hospitalization (1/4 of the inpatient hospital deductible) will be $76; the daily coinsurance for lifetime reserve days (1/2 of the inpatient hospital deductible) will be $152; and the daily coinsurance for the 21st through the 100th days of extended care services in a skilled nursing facility (1/8 of the inpatient hospital deductible) will be $38.

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*This statement was published in the Federal Register for October 1, 1982, (Vol. 47, No. 191, p. 43631).

Under the formula in the law, the deductible for calendar year 1983 must be equal to $45 multiplied by the ratio of (1) the current average per diem rate for inpatient hospital services for calendar year 1981 to (2) the average per diem rate for such services in 1966. The amount so determined is rounded to the nearest multiple of $4. The average per diem rates are based on the amounts paid to participating hospitals by Medicare for inpatient services to insured individuals, plus the deductible and coinsurance amounts.

The average per diem rate for a calendar year is computed from the inpatient hospital bills for all beneficiaries. Each bill shows the number of inpatient days of care and the interim cost (the sum of interim reimbursement, deductible, and coinsurance). The data are summarized for each year, and an average interim per diem rate computed that accurately reflects interim costs on an accrual basis.

In order to reflect the change in the average per diem hospital cost under the program properly, the average interim cost must be adjusted to show the effect of final cost settlements made with each participating hospital after the end of its accounting year. The final settlements adjust the interim payment to the hospital to the actual full cost of providing covered services to beneficiaries. To the extent that the ratio of final cost to interim cost for 1981 differs from the ratio of final costs to interim costs for 1966, the increase in average interim per diem costs will not coincide with the increase in actual cost that has occurred.

The current average interim per diem rate for inpatient hospital services for calendar year 1981, based on tabulated interim costs, is $258.79; the corresponding amount for 1966 is $37.92. The averages are based on approximately 103 million days of hospitalization in 1981 and 30 million days in 1966 (last 6 months of the year). The ratio of final cost to interim cost is approximately 1.047 for 1981 and 1.055 for 1966. Thus, the inpatient hospital deductible is $45 x (258.79 x 1.047)/(37.92 x 1.055) = $304.78, which is rounded to $304.

IMPACT ANALYSES

The inpatient hospital deductible and coinsurance amounts for the calendar year 1983 will be 17 percent higher than the 1982 amounts. The inpatient hospital deductible increased from $260 to $304; the daily coinsurance for the 61st through 90th days of hospitalization increased from $65 to $76; the daily coinsurance for lifetime reserve days increased from $130 to $152; and the daily coinsurance for the 21st through 100th days of extended care sevices in a skilled nursing facility increased from $32.50 to $38.

The estimated cost to beneficiaries due to these increases is $450 million. This amount is based on an estimated 7.5 million beneficiaries who will have 8.5 million benefit periods and use 4.9 million coinsurance days and 1.2 million lifetime reserve days in 1983.

HCFA computed the 1983 inpatient hospital deductible and coinsurance amounts in the same manner as in previous years as required by section 1813 of the Act. The costs associated with this notice are the result of legislative requirements implemented by this notice. Since this notice merely announces amounts required by legislation and is not a proposed rule or final rule issued after a proposal, no analysis is required under Executive Order 12291 or the Regulatory Flexibility Act.

Dated: September 27, 1982

Richard S. Schweiker
Secretary

APPENDIX D

DETERMINATION AND ANNOUNCEMENT OF THE HOSPITAL INSURANCE MONTHLY PREMIUM RATE FOR THE UNINSURED AGED, FOR THE 12-MONTH PERIOD BEGINNING JULY 1, 1983*

Under the authority in section 1818(d)(2) of the Social Security Act (42 U.S.C. 1395i2(d)(2)), I have determined that the monthly Medicare hospital insurance premium for the uninsured aged for the 12 months beginning July 1, 1983, is $132.

Section 1818 of the Social Security Act provides for voluntary enrollment in the hospital insurance program (Part A of Medicare), subject to payment of a monthly premium, of certain persons age 65 and older who are uninsured for social security or railroad retirement benefits and do not otherwise meet the requirements for entitlement to hospital insurance. (Persons insured under the Social Security or Railroad Retirement Acts need not pay premiums for hospital insurance.)

Section 1818(d)(2) of the Act requires the Secretary to determine and publish, during the last quarter of each calendar year, the amount of the monthly Part A premium for voluntary enrollment for the 12-month period beginning with the following July 1. The formula specified in this section also requires that, for the period beginning July 1, 1983, the 1973 base year premium ($33) be multiplied by the ratio of (1) the 1983 inpatient hospital deductible to (2) the 1973 inpatient hospital deductible, rounded to the nearer multiple of $1 or, if midway between multiples of $1, to the next higher multiple of $1.

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*This statement was published in the Federal Register for December 27, 1982, (Vol.47, No. 248, p. 57574). However, Public Law 98-21 subsequently provided that the monthly premium of $113 for the uninsured aged, which applied for the 12 months beginning July 1, 1982, continue to apply until December 31, 1983. The monthly premium will increase on a calendar year basis thereafter.

Under section 1813(b)(2) of the Act, the 1983 inpatient hospital deductible was determined to be $304. (See 47 FR 43631, October 1, 1982.) The 1973 deductible was actuarially determined to be $76, although the 1973 deductible was actually promulgated to be only $72, to comply with a ruling of the Cost of Living Council. (See 37 FR 21452, October 11, 1972.) The monthly premium for the 12-month period beginning July 1, 1983, has been calculated using the $76 deductible for 1973, since this more closely satisfies the intent of the law. Thus, the monthly hospital insurance premium is $33 x (304/76) = $132.

IMPACT ANALYSES

The monthly hospital insurance premium for the uninsured aged for the 12-month period beginning July 1, 1983, will increase to $132. That amount is 17 percent higher than the $113 monthly premium amount for the previous 12-month period.

The estimated cost of this increase to the approximately 24 thousand enrollees who do not otherwise meet the requirements for entitlement to hospital insurance will be about $5 million.

Because this notice merely announces an amount required by the formula specified in section 1818(d)(2) of the Act, and does not alter any regulation or policy, no analyses under Executive Order 12291 or the Regulatory Flexibility Act, Public Law 96-354, are required.

Dated: December 17, 1982

Richard S. Schweiker
Secretary

APPENDIX E

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Hospital Insurance Trust Fund, taking into account the experience and expectations of the program.

Roland E. King

Roland E. King
Fellow of the Society of Actuaries
Member of the American Academy of Actuaries
Director, Office of Financial and Actuarial Analysis
Health Care Financing Administration

98TH CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

DOCUMENT
No. 98-76

1983 ANNUAL REPORT

FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

TRANSMITTING

THE 1983 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT, AS AMENDED

JUNE 28, 1983.—Referred to the Committees on Ways and Means and Energy and Commerce jointly and ordered to be printed.

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C., June 24, 1983

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES
Washington, D.C.

SIR: We have the honor to transmit to you the 1983 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 18th such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

Donald T. Regan
DONALD T. REGAN,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

Raymond J. Donovan
RAYMOND J. DONOVAN,
Secretary of Labor, and Trustee

Margaret M. Heckler
MARGARET M. HECKLER,
Secretary of Health and Human Services,
and Trustee

Carolyne K. Davis
CAROLYNE K. DAVIS, Ph.D.,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C., June 24, 1983

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1983 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL
SUPPLEMENTARY MEDICAL INSURANCE
TRUST FUND

TRANSMITTING

THE 1983 ANNUAL REPORT OF THE BOARD, PURSUANT TO
SECTION 1841(b) OF THE SOCIAL SECURITY ACT
AS AMENDED

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C., June 24, 1983

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1983 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

THE BOARD OF TRUSTEES

The Federal Supplementary Medical Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1841(b) of the Social Security Act, as amended. Currently, the board has three members, who serve in an ex officio capacity. The members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983) provide for the addition of two public members to the Board of Trustees. The two new members are to be nominated by the President for a term of 4 years, and are subject to confirmation by the Senate.

By law, the Secretary of the Treasury is designated as the Managing Trustee and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1841(b)(2) of the Social Security Act. This is the 1983 annual report, the eighteenth such report.

HIGHLIGHTS

(a) Disbursements of the supplementary medical insurance trust fund increased 17.6 percent in fiscal year 1982 over 1981. Most of this increase resulted from higher physician fees recognized by the program and the use of more physician services by program enrollees.

(b) Income to the trust fund increased 41.7 percent in fiscal year 1982 over 1981. This resulted from increased actuarial rates which determine the general revenue contribution and from increased enrollment in the program.

(c) The trust fund increased $2,067 million to $5,810 million during 1982.

(d) In December of 1982, the Secretary of Health and Human Services promulgated a standard monthly premium rate of $13.50 and actuarial rates of $27.00 for the aged enrollees and $46.10 for the disabled enrollees for the 12-month period ending June 30, 1984. However, Public Law 98-21 provided that the standard monthly premium of $12.20, which applied to the 12-month period ending June 30, 1983, continue to apply until December 31, 1983. In addition, the actuarial rates promulgated in December 1982 would only apply to the 6-month period, July 1, 1983 to December 31, 1983.

(e) An average of 25.5 million persons aged 65 and over were enrolled in the program in fiscal year 1982. An additional 2.7 million disabled beneficiaries were enrolled in the same period.

SOCIAL SECURITY AMENDMENTS SINCE THE 1982 TRUSTEES' REPORT

Public Law 97-248, the "Tax Equity and Fiscal Responsibility Act of 1982," which was enacted September 3, 1982, contains several provisions having an impact on the Federal Supplementary Medical Insurance Trust Fund. They are:

(1) The Secretary is authorized to issue regulations to limit the reasonable charge for the services of physicians who perform services in hospital outpatient departments to a percentage of the prevailing charge for similar services furnished in a physician's office. Thus, duplicate overhead payments are eliminated by taking into account the extent to which the overhead cost of an outpatient department have been included in the hospital's costs or charges. Effective for services provided on or after October 1, 1982.

(2) The basis upon which provider-based physicians are reimbursed are to be prescribed in regulations which distinguish between (a) professional medical services which are personally rendered to individual patients which contribute to the patient's diagnosis and treatment (reimbursed on the basis of reasonable charges under SMI), and (b) professional medical services of practitioners which are of benefit to patients generally (reimbursed on the basis of reasonable costs under HI). Reasonable cost reimbursement of provider-based services may not exceed a reasonable compensation equivalent established by the Secretary in regulations. Effective for cost reporting periods ending after September 30, 1982, but only for the portion occurring after that date.

(3) Reimbursement for assistants at surgery in hospitals where approved training programs exist and qualified staff physicians are available is prohibited, except under appropriate circumstances determined by the Secretary. Effective with respect to services performed on or after October 1, 1982.

(4) Payment for drugs that have been determined to be less than effective in use by the Food and Drug Administration is prohibited. Effective September 30, 1982.

(5) Medicare becomes the secondary payor for employees aged 65 through 69 (and their spouses of the same age) who are covered by health plan benefits of an employer. The Federal Age Discrimination in Employment Act (ADEA) is also amended so that an employer can no longer exclude from his health care plan those benefits covered by Medicare, and must offer his employees aged 65 through 69 and their dependents health benefits coverage under the same conditions as offered his younger employees. The Federal Age Discrimination in Employment Act is amended effective January 1983. The amendment to the Social Security Act is effective with respect to items and services furnished on or after January 1, 1983.

(6) Interest payments are required when the settlement of an account by or to a provider or supplier of services or physician (but not a beneficiary) takes longer than 30 days after the date of determination. Effective upon enactment.

(7) From July 1983 through June 1985, the monthly SMI premium is set at one-half the actuarial rate for aged enrollees. After June 1985 the determination of the premium rate will revert to the method used before enactment of this provision. Effective from July 1, 1983, through June 30, 1985.

(8) A special enrollment period for Medicare SMI is established for merchant seamen who can document their former eligibility for health benefits under the Public Health Service (PHS) Act before repeal of those benefits. The enrollment period extends from October 1 through December 31, 1982. Seamen who qualify may enroll without having to pay the late enrollment surcharge and can elect retroactive coverage to October 1, 1981. Effective the first month occurring at least 20 days after enactment.

(9) The Medicare contractor budgets will be supplemented by an additional $45 million for fiscal years 1983, 1984 and 1985. The additional funds must be used exclusively for provider audits and medical necessity review. Effective October 1, 1982.

(10) The Secretary is required to undertake an initiative to improve medical review performed by Medicare contractors and encourage similar efforts by private insurers and other private entities. Specific standards must be developed to measure the performance of Medicare contractors in identifying and reducing unnecessary utilization. Effective upon enactment.

Public Law 97-455, the "Virgin Islands Tax Reduction Act, " which was enacted on January 12, 1983 contains two provisions having an impact on the Federal Supplementary Medical Insurance Trust Fund. They are:

(1) The flow of continuing disability investigation cases (some of which involve Medicare benefits) sent to State agencies for periodic review may be reduced by the Secretary on a State-by-State basis depending on State workloads and staffing requirements. The slowing of review (and probably the rate of termination) is allowed even if it means that the initial periodic review cannot be completed within three years. Effective upon enactment.

(2) Medicare benefits may be continued, along with cash disability benefits, on request of the beneficiary through the Administrative Law Judge (ALJ) hearing on appealed termination decisions. If termination of benefits is upheld, the continued benefits would be treated as overpayments. Effective for benefits beginning January 1983 with respect to termination decisions made by State agencies between enactment and October 1983, but payment of such continued benefits could continue only through June 1984.

Public Law 97-448, the "Technichal Corrections of 1982," which was enacted on January 12, 1983, amends the provision in the Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) which extends Medicare coverage to Federal employees. The amendment defines "Medicare qualified Federal employment" and the conditions under which spouses of transitionally insured Federal employees (those who use Federal employment on or before January 1, 1983, to qualify for entitlement) may become entitled. Spouses of Federal employees may qualify on the same basis as spouses of other insured workers and may become eligible for Medicare without waiting for the entitlement of the Federal employee. Effective January 1, 1983.

Public Law 98-21, "the Social Security Amendments of 1983", which was enacted April 20, 1983, contains five provisions having an impact on the Federal Supplementary Medical Insurance Trust Fund. They are:

(1) Trust fund operations would be removed from the unified budget beginning in fiscal year 1992.

(2) The premium applicable July 1, 1983 through December 31, 1983 is frozen at the rate which applied in June 1983. Some general revenues shall be added from July through December to compensate for keeping the smaller June 1983 premium for that period. Future premium increases shall apply on the calendar year. Effective upon enactment.

(3) Inpatient hospital services many no longer be provided by direct contracts and reimbursed under SMI. They may be supplied only by or under arrangements with the hospital subject to hospital insurance reimbursement requirements. However, the Secretary many waive this restriction for hospitals that have billed extensively under SMI. Effective with the first cost reporting period beginning on or after October 1, 1983.

(4) Workers who are disabled before age 31, recover and then become disabled after age 31, may be insured for disability benefits if they had coverage in half the calendar quarters after age 21 and through the quarter in which the later period of disability began. Effective for applications filed after enactment.

(5) Two members of the public are added to the Board of Trustees. The two public members are to be nominated by the President for terms of four years and confirmed by the Senate. Both public members cannot be members of the same political party. A person serving on the Board of Trustees is no longer considered a fiduciary and cannot be held personally liable for actions taken as a member of the Board of Trustees. Effective upon enactment.

NATURE OF THE TRUST FUND

The Federal Supplementary Medical Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the supplementary medical insurance program are handled through this fund.

The major sources of receipts of the trust fund are (1) premiums paid by eligible persons who are voluntarily enrolled in the program and (2) contributions of the Federal Government that are authorized to be appropriated and transferred from the general fund of the Treasury. Eligible persons aged 65 and over have been able to enroll in the program since its inception in July 1966. Since July 1973, disabled persons under age 65, who meet certain eligibility requirements, have also been able to enroll in the program.

The premiums paid by participants are based on the standard monthly premium rate, which is the same for participants aged 65 and over and for disabled participants under age 65. Premiums paid for fiscal years 1967 through 1973 were matched by an equal amount of Government contributions. Beginning July 1973, the amount of Government contributions corresponding to premiums paid by each of the two groups of participants is determined by applying a ratio, prescribed in the law for each group, to the amount of premiums received from that group of participants. The ratio is equal to (1) twice the amount of the monthly actuarial rate applicable to the particular group of participants, minus the amount of the standard monthly premium rate, divided by (2) the amount of the standard monthly premium rate.

Standard monthly premium rates and actuarial rates are promulgated each year by the Secretary of Health and Human Services. The standard monthly premium rates in effect from the beginning of the program, July 1966 through June 1983, and the rate for July 1983 through December 1983 are shown in table 1. Actuarial rates in effect from July 1973 through June 1983, and the rates applicable for July 1983 through December 1983 are also shown.

Another source from which receipts of the trust fund are derived is interest received on investments held by the fund. The investment procedures of the fund are described later in this section.

Section 201(i) of the Social Security Act authorizes the Managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or for any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the program are paid out of the trust fund. All expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in carrying out the supplementary medical insurance provisions of title XVIII of the Social Security Act are charged to the trust fund. The Secretary of Health and Human Services certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

Hospitals, at their option, are permitted to combine their billing for both hospital costs and physician components of radiology and pathology

Table 1.--STANDARD MONTHLY PREMIUM RATES AND ACTUARIAL RATES

	Standard monthly premium rate	Monthly actuarial rate	
		Participants aged 65 and over	Disabled participants under age 65
July 1966 - March 1968	$ 3.00	--	--
April 1968 - June 1970	4.00	--	--
12-month period ending June 30 of --			
1971	5.30	--	--
1972	5.60	--	--
1973	5.80	--	--
1974*	6.30	$6.30	$14.50
1975	6.70	6.70	18.00
1976	6.70	7.50	18.50
1977	7.20	10.70	19.00
1978	7.70	12.30	25.00
1979	8.20	13.40	25.00
1980	8.70	13.40	25.00
1981	9.60	16.30	25.50
1982	11.00	22.60	36.60
1983	12.20	24.60	42.10
July 1983 - December 1983	12.20	27.00	46.10

* In accordance with limitations on the costs of health care imposed under Phase III of the Economic Stabilization program, the standard premium rate for July and August 1973 was set at $5.80 and $6.10, respectively. Effective September 1973, the rate increased to $6.30.

services rendered hospital inpatients by hospital-based physicians. Where hospitals elect this billing procedure, payments are made initially from the Hospital Insurance Trust Fund, with reimbursement later to it from the Supplementary Medical Insurance Trust Fund. The reimbursements so made are on a provisional basis and are subject to adjustment, with appropriate interest allowances, as the actual experience develops and is analyzed.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under the hospital insurance and supplementary medical insurance programs. A sizeable portion of such costs of such experiments and demonstration projects are paid out of the hospital insurance and supplementary medical insurance trust funds, with the remainder funded through general revenues.

Congress has authorized expenditures from the trust funds for construction, rental, and lease or purchase contracts of office buildings and related facilities for use in connection with the supplementary medical insurance program. Both the capital costs of construction financed directly from the trust fund and the rental, lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. Obligations of these types may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1982

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in fiscal year 1982 and of the assets of the fund at the beginning and end of the fiscal year is presented in table 2. Comparable amounts for fiscal year 1981 are also shown in the table.

The total assets of the trust fund amounted to $3,743 million on September 30, 1981. During fiscal year 1982, total receipts amounted to $17,627 million, and total disbursements were $15,560 million. Total assets thus increased $2,067 million during the year to a total of $5,810 million on September 30, 1982.

Of the total receipts, $3,460 million represented premium payments by (or on behalf of) participants aged 65 and over, and $371 million represented premium payments by (or on behalf of) disabled participants under age 65. Total premium payments amounted to $3,831 million, an increase of 15.4 percent over the amount of $3,320 million for the preceding year. This increase in premiums from participants resulted primarily from (1) the growth in the number of persons enrolled in the supplementary medical insurance program and (2) the increase from $9.60 to $11.00 per month in the standard premium rate that became effective on July 1, 1981, and the increase from $11.00 to $12.20 per month in the standard premium rate that became effective on July 1, 1982.

Contributions received from the general fund of the treasury amounted to $13,323 million. This amount consisted of $11,208 million representing

Table 2.--STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEARS 1981 and 1982
(In thousands)

	Fiscal year 1981	Fiscal year 1982
Total assets of the trust fund, beginning of period	$4,531,591	$3,742,690
Receipts:		
Premiums from participants:		
Participants aged 65 and over	2,987,735	3,459,916
Disabled participants under age 65	331,873	370,642
Total premiums	3,319,607	3,830,558
Transfers from general fund of the Treasury:		
Government contributions:		
For premiums received from participants aged 65 and over	7,191,421	11,208,236
For premiums received from disabled participants under age 65	1,556,009	2,114,776
Total Government contributions	8,747,430	13,323,012
Other	0	266
Interest:		
Interest on investments	409,386	484,085
Interest on amounts of interfund transfers 1/	-37,072	-10,883
Total receipts	12,439,359	17,627,038
Disbursements:		
Benefit Payments	12,344,913	14,806,219
Reimbursement to general fund:		
Treasury Administrative Expenses	367	1,820
Civil Service Administrative Expenses	0	0
Railroad Retirement Board	0	0
Payment of Department of Health and Human Services Expenses:		
Salaries and Expenses - SSA	131,107	152,952
Salaries and Expenses - HCFA	533,053	517,863
Salaries and Expenses Office of Secretary	3,461	3,141
Construction	608	5,820
Professional Standard Review Organization	-5,928	6,724
Reimbursement of SSA Expenses 2/	4,726	368
Reimbursement of HCFA 2/	235,154	65,233
Total Disbursements	13,228,261	15,559,735
Net addition to the trust fund	-788,902	2,067,303
Total assets of the trust fund, end of period	3,742,690	5,809,993

1/ A positive figure represents a transfer of interest to the supplementary medical insurance trust fund from the other trust funds. A negative figure represents a transfer of interest from the supplementary medical insurance trust fund to the other trust funds.

2/ A positive figure represents a transfer from the supplementary medical insurance trust fund to the other trust funds. A negative figure represents a transfer to the supplementary medical insurance trust fund from the other trust funds.

NOTE: Totals do not necessarily equal the sum of rounded components.

contributions relating to premiums paid by participants aged 65 and over, and $2,115 million representing contributions relating to the premiums paid by disabled participants under age 65.

The remaining $473 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the $15,560 million in total disbursements, $14,806 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act; (2) transfers made to the hospital insurance trust fund to adjust for the loss of interest caused by the delay in transferring payments for the costs of radiology and pathology services that were paid initially from the hospital insurance trust fund but that were liabilities of the supplementary medical insurance trust fund, and (3) for costs of experiments and demonstration projects in providing health care services.

The remaining $754 million of disbursements was for net administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds--old-age and survivors insurance, disability insurance, hospital insurance, and supplementary medical insurance--on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are affected by interfund transfers, including transfers between the hospital insurance and supplementary medical insurance trust funds and the program management general fund account, with appropriate interest allowances.

In table 3, the experience with respect to actual amounts of participants' premiums, Government contributions, and benefit payments in fiscal year 1982 is compared with the estimates for fiscal year 1982 which appeared in the 1981 and 1982 annual reports. The actual experience was relatively close to the estimates for premiums, Governments contributions, and benefit payments.

The assets of the trust fund at the end of fiscal year 1981 totaled $3,743 million, consisting of $3,821 million in the form of obligations of the U.S. Government and, as an offset, an extension of credit of $79 million against securities to be redeemed. The assets of the trust fund at the end of fiscal year 1982 totaled $5,810 million, consisting of $5,874 million in the form of obligations of the U.S. Government and, as an offset, an extension of credit of $64 million against securities to be redeemed. Table 4 shows a comparison of the total assets of the fund and their distribution at the end of fiscal year 1981 and at the end of fiscal year 1982. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in a later section.

The net decrease in the par value of the investments held by the fund during fiscal year 1981 amounted to $737 million. New securities at a total par value of $12,497 million were acquired during the fiscal year

Table 3.--COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1982
(Dollar amounts in millions)

		Comparison of actual experience with estimates for fiscal year 1982 published in--			
		1982 report		1981 report	
Item	Actual amount	Estimated amount	Actual as percentage of estimate	Estimated amount	Actual as percentage of estimate
Premiums from participants	$3,831	$3,825	100	$3,841	100
Government contributions	13,323	13,323	100	13,446	99
Benefit payments	14,806	14,903	99	14,378	103

TABLE 9.--ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, AT THE END OF FISCAL YEARS 1981 AND 1982 1/

	September 30, 1981	September 30, 1982
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:		
12 1/4-percent, 1983	------	$122,723,000.00
13 1/4-percent, 1983	------	135,906,000.00
13 7/8-percent, 1983	------	851,411,000.00
14 7/8-percent, 1982	$192,830,000.00	------
Bonds:		
7 1/8-percent, 1985	56,245,000.00	56,245,000.00
7 1/8-percent, 1986	56,245,000.00	56,245,000.00
7 1/8-percent, 1987	56,245,000.00	56,245,000.00
7 1/8-percent, 1988	56,245,000.00	56,245,000.00
7 1/8-percent, 1989	56,245,000.00	56,245,000.00
7 1/8-percent, 1990	56,246,000.00	56,246,000.00
7 1/8-percent, 1991	56,246,000.00	56,246,000.00
7 1/8-percent, 1992	137,816,000.00	137,816,000.00
7 3/8-percent, 1985	11,546,000.00	11,546,000.00
7 3/8-percent, 1986	11,547,000.00	11,547,000.00
7 3/8-percent, 1987	11,547,000.00	11,547,000.00
7 3/8-percent, 1988	11,547,000.00	11,547,000.00
7 3/8-percent, 1989	11,547,000.00	11,547,000.00
7 3/8-percent, 1990	73,510,000.00	73,510,000.00
7 1/2-percent, 1985	8,061,000.00	8,061,000.00
7 1/2-percent, 1986	8,061,000.00	8,061,000.00
7 1/2-percent, 1987	8,061,000.00	8,061,000.00
7 1/2-percent, 1988	8,061,000.00	8,061,000.00
7 1/2-percent, 1989	8,061,000.00	8,061,000.00
7 1/2-percent, 1990	8,060,000.00	8,060,000.00
7 1/2-percent, 1991	81,570,000.00	81,570,000.00
7 5/8-percent, 1984	57,403,000.00	49,019,000.00
7 5/8-percent, 1985	61,964,000.00	61,964,000.00
7 5/8-percent, 1986	61,963,000.00	61,963,000.00
7 5/8-percent, 1987	61,963,000.00	61,963,000.00
7 5/8-percent, 1988	61,963,000.00	61,963,000.00
7 5/8-percent, 1989	61,963,000.00	61,963,000.00
8 1/4-percent, 1984	115,978,000.00	115,978,000.00
8 1/4-percent, 1985	115,978,000.00	115,978,000.00
8 1/4-percent, 1986	115,978,000.00	115,978,000.00
8 1/4-percent, 1987	115,978,000.00	115,978,000.00
8 1/4-percent, 1988	115,978,000.00	115,978,000.00
8 1/4-percent, 1989	115,978,000.00	115,978,000.00
8 1/4-percent, 1990	115,978,000.00	115,978,000.00
8 1/4-percent, 1991	115,978,000.00	115,978,000.00
8 1/4-percent, 1992	115,978,000.00	115,978,000.00
8 1/4-percent, 1993	253,794,000.00	253,794,000.00
8 3/4-percent, 1984	72,935,000.00	72,935,000.00
8 3/4-percent, 1985	72,935,000.00	72,935,000.00
8 3/4-percent, 1986	72,934,000.00	72,934,000.00
8 3/4-percent, 1987	72,934,000.00	72,934,000.00
8 3/4-percent, 1988	72,934,000.00	72,934,000.00
8 3/4-percent, 1989	72,934,000.00	72,934,000.00
8 3/4-percent, 1990	72,934,000.00	72,934,000.00
8 3/4-percent, 1991	72,934,000.00	72,934,000.00
8 3/4-percent, 1992	72,934,000.00	72,934,000.00
8 3/4-percent, 1993	72,934,000.00	72,934,000.00
8 3/4-percent, 1994	126,728,000.00	126,728,000.00
8 3/4-percent, 1995	115,003,000.00	115,003,000.00
12 3/4-percent, 1984	------	130,068,000.00
13 3/4-percent, 1985	------	42,250,000.00
13 3/4-percent, 1986	------	42,251,000.00
13 3/4-percent, 1987	------	42,251,000.00
13 3/4-percent, 1988	------	42,251,000.00
13 3/4-percent, 1989	------	42,251,000.00
13 3/4-percent, 1990	------	42,251,000.00
13 3/4-percent, 1991	------	42,251,000.00
13 3/4-percent, 1992	------	42,251,000.00
13 3/4-percent, 1993	------	42,251,000.00
13 3/4-percent, 1994	------	42,251,000.00
13 3/4-percent, 1995	------	253,526,000.00
13 3/4-percent, 1996	------	[illegible]
13 3/4-percent, 1997	------	[illegible]
Total investments in public-debt obligations	3,621,430,000.00	5,879,115,000.00
Undisbursed balance	[illegible] 2/	[illegible] 2/
Total assets	3,782,000,471.50	[illegible]

1/ The assets are carried at par value, which is the same as book value.
2/ The [illegible] represents an extension of credit which was covered by the [illegible] of securities on the first day of the following month.

through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $13,234 million. Included in these amounts is $12,395 million in certificates of indebtedness that were acquired, and $12,401 million in certificates of indebtedness that were redeemed, within the fiscal year.

The net increase in the par value of the investments held by the fund during fiscal year 1982 amounted to $2,053 million. New securities at a total par value of $19,631 million were acquired during the fiscal year through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $17,578 million. Included in these amounts is $17,718 million in certificates of indebtedness that were acquired, and $17,201 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the supplementary medical insurance trust fund the 12 months ending on June 30, 1982, was 9.9 percent. (This period is used because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on special issues purchased by the trust fund in June 1982 was 13 1/4 percent, payable semiannually.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND DURING THE PERIOD OCTOBER 1, 1982 TO DECEMBER 31, 1985

Financing for the supplementary medical insurance program is established annually on the basis of standard monthly premium rates (paid by or on behalf of the participants) and actuarial rates (on which general revenue contributions are based). Prior to June 30, 1983, these rates were applicable to 12-month periods ending June 30. Beginning January 1, 1984, Public Law 98-21 changed the annual basis to the 12-month periods ending December 31. For the 6-month period July 1, 1983 through December 31, 1983 (hereafter also called the transition semester), the standard monthly premium rate was frozen at the June 1983 rate, and the actuarial rates were set at the rates promulgated in December 1982 for the 12-month period ending June 30, 1984. In recent years, allowable fee limits for physician services have been established to apply to a July 1 to June 30 period.

Standard premium rates and acturial rates have been set for periods through December 31, 1983. It has been assumed in this report that financing after that time will be established to cover the incurred expenses of the program.

The projections shown in the following tables are based on two sets of economic assumptions labeled alternative A and alternative B. These alternatives reflect two different levels of expectation of future performance of the economy. Appendix A presents an explanation of the effects of alternative A and alternative B on the projections in this report.

Under both projections it is assumed that allowable fees for physician services will increase an average of 9.6 percent for the 12-month period ending June 30, 1983 and will increase an average of 6.9 percent for the 12-month period ending June 30, 1984. The costs per enrollee for institutional and other services under SMI are projected to increase an average of 17 percent for the 12-month period ending June 30, 1983 over the previous 12 months and an additional 12 percent for the 12-month period ending June 30, 1984. These values reflect the implementation effects of Public Laws 96-499, 97-35, 97-248, and 98-21 on cost per enrollee increases.

Table 5 shows the projected operations of the trust fund on a fiscal year basis through fiscal year 1985. Table 6 shows the corresponding development on a calendar year basis. The trust fund balance was $5.8 billion at the end of fiscal year 1982. The actuarial rates for the 12-month period ending June 30, 1983 were promulgated with specific margins to maintain assets at a desirable level. Since it appeared that assets were more than sufficient to cover the incurred costs and to provide an appropriate contingency for the 12-month period ending June 30, 1984 (the financing period prior to Public Law 98-21), the actuarial rates for this period were set to reduce the assets to a more appropriate level. Public Law 98-21 provided that these actuarial rates are effective only for the 6-month period ending December 31, 1983. The fund is projected to increase to $6.5 billion under both alternatives by the end of fiscal year 1983 and then to increase to $7.6 billion by the end of fiscal year 1984.

Table 5.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
FISCAL YEARS 1983-1985 AND ACTUAL DATA FOR 1967-1982
(In millions)

Fiscal year	Income: Premiums from participants	Income: Government contributions 1/	Income: Interest and other income 2/	Income: Total income	Disbursements: Benefit payments	Disbursements: Administrative expenses	Disbursements: Total disbursements	Balance in fund at end of year 3/
Historical:								
1967	$ 647	$ 623	$ 15	$1,285	$ 664	$ 135 4/	$ 799	$ 486
1968	698	634	21	1,353	1,390	142	1,532	307
1969	903	984	24	1,911	1,645	195	1,840	378
1970	936	928	12	1,876	1,979	217	2,196	57
1971	1,253	1,245	18	2,516	2,035	248	2,283	290
1972	1,340	1,365	29	2,734	2,255	289	2,544	481
1973	1,427	1,430	45	2,902	2,391	246	2,637	746
1974	1,704	2,029	76	3,809	2,874	409	3,283	1,272
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1976	1,951	2,939	104	4,994	4,672	528	5,200	1,219
Interim 5/	539	878	4	1,421	1,269	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1981	3,320	8,747	372	12,439	12,345	883	13,228	3,743
1982	3,831	13,323	473	17,627	14,806	754	15,560	5,810
Projected:								
Alternative A:								
1983	4,191	14,238	651	19,080	17,537	810	18,347	6,543
1984	4,936	16,760	658	22,354	20,410	849	21,259	7,638
1965	5,734	18,895	700	25,329	23,621	890	24,511	8,456
Alternative B:								
1983	4,191	14,238	651	19,080	17,537	812	18,349	6,541
1984	4,936	16,769	660	22,365	20,422	849	21,271	7,635
1985	5,760	18,983	707	25,450	23,695	894	24,589	8,496

1/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.

2/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

3/ The financial status of the program depends on both the total net assets and the liabilities of the program. (See Table 8)

4/ Administrative expenses shown include those paid in fiscal years 1966 and 1967.

5/ Interim Period is the period from July 1, 1976 to September 30, 1976 and is the transitional period between fiscal years beginning July 1 and fiscal years beginning October 1.

Table 6.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
CALENDAR YEARS 1983-1985 AND ACTUAL DATA FOR 1966-1982
(In millions)

Calendar year	Income				Disbursements			Balance in fund at end of year 3/
	Premiums from participants	Government contributions 1/	Interest and other income 2/	Total income	Benefit payments	Administrative expenses	Total disbursements	
Historical:								
1966	$ 322	$ 0	$ 2	$ 324	$ 128	$ 75	$ 203	$ 122
1967	640	933	24	1,597	1,197	110	1,307	412
1968	832	858	21	1,711	1,518	184	1,702	421
1969	914	907	18	1,839	1,865	196	2,061	199
1970	1,096	1,093	12	2,201	1,975	237	2,212	188
1971	1,302	1,313	24	2,639	2,117	260	2,377	450
1972	1,382	1,389	37	2,808	2,325	289	2,614	643
1973	1,550	1,705	57	3,311	2,526	318	2,844	1,111
1974	1,804	2,225	95	4,124	3,318	410	3,728	1,506
1975	1,918	2,648	106	4,673	4,273	462	4,735	1,444
1976	2,060	3,810	107	5,977	5,080	542	5,622	1,799
1977	2,247	5,386	172	7,805	6,038	467	6,505	3,099
1978	2,470	6,287	299	9,056	7,252	503	7,755	4,400
1979	2,719	6,645	404	9,768	8,708	557	9,265	4,902
1980	3,011	7,455	408	10,874	10,635	610	11,245	4,530
1981	3,722 4/	11,291 4/	361	15,374	13,113	915	14,028	5,877
1982	3,697 4/	12,284 4/	599	16,580	15,455	772	16,227	6,230
Projected:								
Alternative A:								
1983	4,204	14,735	645	19,584	18,224	819	19,043	6,771
1984	5,171	16,999	679	22,849	21,200	860	22,060	7,560
1985	5,921	19,527	718	26,166	24,491	901	25,392	8,334
Alternative B:								
1983	4,204	14,735	645	19,584	18,226	821	19,047	6,767
1984	5,171	17,012	683	22,866	21,224	859	22,083	7,550
1985	5,956	19,640	732	26,328	24,591	906	25,497	8,381

1/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.

2/ Other income-includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

3/ The financial status of the program depends on both the total net assets and the liabilities of the program. (See Table 8)

4/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday or legal public holiday. Delivery of benefit checks normally due January, 1982 occurred on December 31, 1981. Consequently, the SMI premiums withheld from the checks ($264 million) and the general revenue matching contributions ($883 million) were added to the SMI Trust Fund on December 31, 1981. These amounts are excluded from the premium income and general revenue income for calendar year 1982.

ACTUARIAL STUATUS OF THE TRUST FUND

1. ACTUARIAL SOUNDNESS OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The concept of actuarial soundness, as it applies to the supplementary medical insurance program, is closely related to the concept as it applies to private group insurance. The supplementary medical insurance program essentially is yearly renewable term insurance intended to be self-supporting from premium income paid by the enrollees and from income contributed from general revenue in proportion to premium payments. The law requires the Secretary of Health and Human Services to establish income on the basis of incurred costs. That is, the income to the program during a 12-month period for which financing is being established must be sufficient to pay for services (including associated administrative costs) expected to be rendered during that period even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover those benefits not paid until after the close of the year is added to the trust fund until needed. Thus, the amount of assets in the trust fund at any time should be no less than the costs of the benefits and administration incurred but not yet paid. Since the income per enrollee (premium plus government contribution rate) is established prospectively, it is subject to projection error. As a result, the income to the program may not be equal to incurred costs; therefore trust fund assets should be maintained at a level which is adequate to cover the impact of a moderate degree of projection error as well as the value of incurred but unpaid expenses.

In testing the actuarial soundness of the supplementary medical insurance program, it is not appropriate to look beyond the period for which the enrollee premium rate and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that (1) income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities which will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to cover the impact of a moderate degree of projection error.

2. INCURRED EXPERIENCE OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The tests of actuarial soundness of the supplementary medical insurance program noted above rely on the incurred experience of the program. Cash disbursements for benefits and administrative expenses by themselves are misleading, due to the relatively large liabilities outstanding at any time for benefits and processing costs that must be paid for services already performed. These liabilities result from the lag between the time that services are performed and the time that payments for them are made.

The experience of the program is substantially more difficult to determine on an incurred basis than on a cash basis. Payment for some services is reported only on a cash basis, and the incurred experience must be inferred from the cash payment information. For recent time periods, the tabulations of bills are incomplete due to normal processing delays. Finally, since bills are tabulated only for a sample of beneficiaries, the data is subject to bias and random fluctuation inherent in the sampling process.

Table 7 shows the estimated transactions of the trust fund on an incurred basis. For the reasons stated above, the incurred experience must be viewed as an estimate even for historical years. Various checks, such as cash outlay data, assure that the estimates are reasonably close, however.

Table 7.--ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1983
(In millions)

Financing Period	Premiums from participants	Government contributions	Interest and other income	Benefit payments	Administrative expenses	Net operations in year
12-month period ending June 30, Historical:						
1967	$ 647	$ 647	$ 15	$1,108	$123 1/	$ 78
1968	698	698	21	1,443	155	-181
1969	903	903	24	1,766	190	-126
1970	936	936	12	1,930	213	-259
1971	1,253	1,253	18	2,090	259	175
1972	1,340	1,340	29	2,289	259	161
1973	1,427	1,426	45	2,499	300	99
1974	1,704	2,031	76	3,153	354	304
1975	1,887	2,396	105	3,945	437	6
1976	1,951	2,972	109	4,847	487	-302
1977	2,156	4,697	157	5,914	520	576
1978	2,358	5,991	254	7,027	512	1,064
1979	2,601	6,570	365	8,274	649	613
1980	2,823	6,627	421	10,009	647	-785
1981	3,178	8,219	371	12,140	725	-1,097
1982	3,737	12,488	495	14,632	764	1,324
Projected:						
Alternative A:						
1983	4,178	13,782	655	17,477	802	336
Transition Semester 2/	2,113	7,885	320	10,126	406	-214
Alternative B:						
1983	4,178	13,782	655	17,479	803	333
Transition Semester 2/	2,113	7,885	320	10,128	407	-217

1/ Includes administrative expenses incurred prior to the beginning of the program.
2/ The transition semester is the 6-month period July 1, 1983 to December 31, 1983.

3. ACCUMULATED EXCESS OF ASSETS OVER LIABILITIES

The liability outstanding at any time for the cost of services performed for which no payment has been made is referred to as "benefits incurred but unpaid." Estimates of the amount of benefits incurred but unpaid as of the end of each financing period, and of the administrative expenses related to processing these benefits, appear in table 8. For most years of the program, assets have not been as large as outstanding liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

Program financing has been established through December 31, 1983. Based on this, financing assets are projected to exceed liabilities by $1,655 million at the end of June 1982. This excess is projected to increase to $1,989 million under alternative A and to $1,986 million under alternative B at the end of June 1983. The financing established for the 6-month period ending December 31, 1983 reduced this excess to a more appropriate level. As a result, the excess of assets over liabilities is expected to decrease to $1,773 million under alternative A and to $1,767 million under alternative B at the end of December 1983. These projected values as of December 31, 1983 amount to about 7.8 percent of incurred expenditures for the following calender year, a more appropriate level to cover the impact of a moderate degree of projection error.

Table 8.--SUMMARY OF ESTIMATED ASSETS AND LIABILITIES OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM, AS OF THE END OF THE FINANCING PERIOD, FOR PERIODS THROUGH DECEMBER 31, 1983
(Dollar amounts in millions)

	Balance in trust fund	Government contributions due and unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total liabilities	Excess of assets over liabilities	Ratio 1/
As of June 30,								
Historical:								
1967	$ 486	$24	$ 510	$ 444	$-12	$ 432	$ 78	.05
1968	307	88	395	497	1	498	-103	-.05
1969	378	7	385	618	-4	614	-229	-.11
1970	57	15	72	569	-8	561	-489	-.21
1971	290	22	312	624	3	627	-315	-.12
1972	481	-3	478	658	-27	631	-153	-.05
1973	746	-7	739	766	27	793	-54	-.02
1974	1,272	-5	1,267	1,045	-28	1,017	250	.06
1975	1,424	67	1,491	1,225	4	1,229	262	.05
1976	1,219	105	1,324	1,400	-37	1,363	-39	-.01
1977	2,170	91	2,261	1,725	0	1,725	536	.07
1978	3,786	47	3,833	2,195	38	2,233	1,600	.18
1979	4,880	2	4,882	2,549	121	2,670	2,212	.21
1980	4,657	0	4,657	3,042	188	3,230	1,427	.11
1981	3,801	0	3,801	3,424	46	3,470	331	.02
1982	5,534	1	5,535	3,820	60	3,880	1,655	.09
Projected:								
Alternative A:								
1983	6,537	0	6,537	4,488	60	4,548	1,989	.09
December 31, 1983	6,771	0	6,771	4,922	76	4,998	1,773	.08
Alternative B:								
1983	6,535	0	6,535	4,489	60	4,549	1,986	.09
December 31, 1983	6,767	0	6,767	4,924	76	5,000	1,767	.08

1/ Ratio of the excess of assets over liabilities to the following year's total incurred expenditures.

4. SENSITIVITY TESTING

Some of the assumptions underlying the projections presented in this report are highly uncertain, and variations in these assumptions would have a substantial impact on expenditures. In order to test the future status of the program under varying assumptions, a low cost projection and a high cost projection were prepared by varying these key assumptions. The low and high cost alternative sets of assumptions are intended to reflect growth rates for the various components of program costs which are more favorable and adverse, respectively, than those of the intermediate projection and which are not unreasonable themselves in light of the nature and historical experience of the program. As such, they provide a range of financial outcomes within which the actual experience of the program might reasonably be expected to fall.

Table 9 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities significantly by the end of December 1983 (the period through which financing has been established), reaching a level of 17 percent of the following year's incurred expenditures. If these low growth rates were actually to materialize, then subsequent financing rates could be adjusted downward in order to lower the excess of assets over liabilities to more appropriate levels. Under the high cost assumptions, trust fund liabilities would exceed assets by the end of December 1983, reaching a level of 1 percent of the following year's incurred expenditures. If these high growth rates were to occur, the subsequent financing rates would have to be adjusted upward in order to generate more appropriate levels for the excess of assets over liabilities.

Table 9.--ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1983

	This Projection			Low Cost Projection			High Cost Projection		
	12-month periods ending June 30,			12-month periods ending June 30,			12-month periods ending June 30,		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Projection factors (in percent): 1/									
Physicians' fees 2/									
Aged	10.8	9.6	6.9	10.3	9.1	6.4	11.3	10.1	7.4
Disabled	10.8	9.6	6.9	10.3	9.1	6.4	11.3	10.1	7.4
Utilization of physicians' services 3/									
Aged	10.8	8.1	7.2	9.8	6.1	5.2	11.8	10.1	9.2
Disabled	15.2	11.9	10.4	13.2	6.9	5.7	17.2	16.9	15.4
Outpatient hospital services per enrollee									
Aged	15.0	14.9	13.0	12.0	7.9	3.0	18.0	21.9	23.0
Disabled	41.0	30.3	22.0	33.0	20.3	12.0	49.0	40.3	32.0
	Financing period			Financing period			Financing period		
	As of June 30, 1982	As of June 30, 1983	As of Dec. 31, 1983	As of June 30, 1982	As of June 30, 1983	As of Dec. 31, 1983	As of June 30, 1982	As of June 30, 1983	As of Dec. 31, 1983
Actuarial status (in millions):									
Assets	$5,535	$6,535	$6,767	$5,535	$7,216	$7,846	$5,535	$5,823	$5,619
Liabilities	3,880	4,549	5,000	3,649	4,211	4,256	4,109	4,887	5,767
Assets less liabilities	$1,655	$1,986	$1,767	$1,886	$3,005	$3,590	$1,426	$ 936	$ -148
Ratio of assets less liabilities to expenditures (in percent) 4/	9.0	9.4	7.8	10.8	15.4	17.0	7.5	4.1	-0.6

1/ Because of the manner in which alternative economic assumptions affect the projected operations of the supplementary medical insurance program, there is not a substantial difference in the projections based upon the two sets of assumptions. Therefore only one projection, alternative B is presented here. Appendix A presents an explanation of the effects of alternative A and alternative B on the projections in this report.

2/ As recognized for payment under the program.

3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.

4/ Ratio of assets less liabilities at the end of the year to toal incurred expenditures during the following year, expressed as a percent.

CONCLUSION

The financing of the supplementary medical insurance program has been established through December 1983, by the setting of standard monthly premium rates (paid by or on behalf of each enrollee) of $12.20 for the year ending June 1983 and $12.20 for the 6-month period ending December 1983 and of actuarial rates which determine the amount to be contributed from general revenue on behalf of each enrollee.

Under both sets of intermediate assumptions used in this report, income, composed of premiums paid by the participants, general revenue contributions and interest earned by the trust fund, is projected to exceed disbursements during FY 1983 and FY 1984. As a result, the assets in the trust fund, on a cash basis, are projected to increase from $5.8 billion at the end of fiscal year 1982 to an estimated $6.5 billion at the end of fiscal year 1983 and then to increase to an estimated $7.6 billion at the end of fiscal year 1984.

Program assets exceeded liabilities by approximately $1,655 million at the end of June 1982 representing 9.0 percent of the projected incurred expenditures for the following 12-month period. Financing for the 12-month period ending June 30, 1983 was established to maintain assets at the same level relative to program expenditures. While the excess of assets over liabilities is projected to increase in the aggregate to $1,989 million under alternative A and to $1,986 million under alternative B, this excess represents 9.4 percent of the projected incurred expenditures for the following 12-month period. The financing for the 6-month period ending

December 31, 1983 reduces this excess to a more appropriate level relative to the growth in program expenditures. Assets are projected to exceed liabilities by $1,773 million under alternative A and by $1,767 million under alternative B representing 7.8 percent of the projected incurred expenditures. Under more pessimistic assumptions as to cost increases, assets based on financing already established will be insufficient to cover outstanding liabilities. However, the trust fund should remain positive allowing claims to be paid. Hence, the financing established through December 1983 is sufficient to cover projected benefit and administrative costs incurred through that time period and to maintain a level of trust fund assets which is adequate to cover the impact of a moderate degree of projection error.

APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM*

1. ESTIMATES FOR AGED AND DISABLED (EXCLUDING ESRD) ENROLLEES

a. Introduction

Estimates for aged and disabled enrollees--excluding disabled persons with end stage renal disease (ESRD)--are prepared by establishing, as accurately as possible, reasonable charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1981, for this report) and projecting these charges through the estimating period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash disbursements, an allowance is made for the delay between receipt of service and payment therefor.

Disabled persons with ESRD have per enrollee costs which are higher and quite different in nature from those of most other disabled persons. Hence, program costs for them have been excluded from the analysis in this section and are included in a later section.

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*Prepared by the Division of Medicare Cost Estimates, Bureau of Data Management and Strategy, Health Care Financing Administration

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b. Establishing a Projection Base:

(1) Physician Services:

Reimbursement amounts for physician services (and small amounts for other services) are paid through organizations acting for the Health Care Financing Administration, referred to as carriers. The carriers determine whether billed services are covered under the program and determine the reasonable charges for the services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to the central office in the form of a "payment record."

Payment records for 0.1 percent of aged beneficiaries and 1.0 percent of disabled beneficiaries are tabulated by date of service, thus providing a data base which is constructed on an incurred basis. Certain minor adjustments are made to the tabulated sample data to correct for biases and random fluctuation inherent in the sampling process. Having the data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis; it also makes possible a comparison of program experience with non-program data sources.

As a check on the validity of the projection base, incurred reimbursement amounts are compared with cash expenditures reported by the carriers through an independent reporting system. In a program with continuously increasing incurred reimbursement amounts, cash payments are expected to be slightly lower than incurred expenses (except in the first year of coverage of a service or group of beneficiaries, when the difference should be substantial). These differences between cash and incurred reimbursement amounts occur because of the lag between receipt of services and payment therefor.

(2) Institutional and Other Services:

Reimbursement amounts for institutional services under the supplementary medical insurance program are paid by the same fiscal intermediaries that pay for hospital insurance services. The principal institutional services covered under the supplementary medical insurance program are outpatient hospital care and home health agency services. However, due to program changes mandated by Public Law 96-499, almost all future payments for home health agency services will be made from the hospital insurance trust fund.

Reimbursements for institutional services occur in two stages. Provider bills are submitted to the intermediaries, and interim payments are made on the basis of these bills. The bills are then submitted to the central office, and tabulations for a sample of beneficiaries are prepared in a manner parallel to that for payment records.

At the close of a provider's accounting period, a cost report is submitted and lump-sum payments or recoveries are made to correct for the difference between interim payments made to the provider and the retroactively determined reasonable cost for providing covered services (net of coinsurance and deductible amounts). The amounts of these retroactive settlements are reported on a cash basis, and approximations are necessary to allocate these payments to the time of service.

Group practice prepayment plans are reimbursed directly by the Health Care Financing Administration on a reasonable cost basis. Comprehensive data are available for these payments only on a cash basis, and certain approximations must be made to allocate expenses to the period when services were rendered.

(3) Summary of Historical Data:

Table A1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1981. Also shown are average enrollment figures for these years. In order to analyze the historical trends in prices and use of services, these reimbursement amounts are converted to the reasonable charges or reasonable costs on which reimbursement was based. This process is necessary largely because the fixed deductible becomes a smaller percentage of charges each year and thus causes reimbursement to rise faster than charges or costs. Table A2 shows the reasonable charges or costs per enrollee corresponding to the reimbursement values shown in table A1.

c. Per Enrollee Increases

(1) Physician Services:

Per enrollee charges for physician services are affected by a variety of factors. Some of these can be identified explicitly. Others can be recognized only by the fact that the explicitly quantifiable factors do not explain all of the increase in per enrollee charges year-to-year.

Increases in average charge per service are one of the most important elements creating increasing charges per enrollee. The physician fee component of the consumer price index provides an estimate of the historical increases in average charge per service. Increases in this index are shown in the first column of table A3.

Table A1.--INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Inpatient radiology and pathology*	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:								
1967	17.750	$62.40	$59.02		$1.41	$ .79	$ .88	$ .30
1968	18.038	80.04	72.56	$1.89	2.40	1.49	1.35	.35
1969	18.833	93.72	79.06	6.57	4.23	1.92	1.54	.40
1970	19.312	99.90	82.84	7.14	5.93	2.00	1.51	.48
1971	19.664	106.26	87.80	7.21	7.56	1.68	1.40	.61
1972	20.043	114.22	94.82	6.77	8.58	1.61	1.66	.78
1973	20.428	122.38	100.95	6.99	9.45	2.17	1.88	.94
1974	20.988	134.37	109.96	7.44	11.42	2.03	2.31	1.21
1975	21.504	160.20	127.48	8.72	15.48	3.84	3.04	1.64
1976	22.089	188.55	145.30	10.89	21.30	5.21	3.83	2.02
1977	22.605	221.31	167.00	12.21	28.72	6.54	4.36	2.48
1978	23.133	254.21	192.23	14.75	33.42	6.82	4.07	2.92
1979	23.693	289.31	217.32	16.33	40.59	6.87	4.89	3.31
1980	24.287	340.63	256.10	18.70	47.05	7.73	7.02	4.03
1981	24.826	405.04	301.96	22.92	57.07	8.58	9.10	5.41
Disabled (excluding ESRD):								
1974	1.636	117.60	90.13	7.54	13.92	3.46	1.89	.66
1975	1.813	150.14	117.42	8.40	17.37	3.59	2.30	1.06
1976	2.015	179.56	138.49	10.03	21.74	5.14	2.69	1.47
1977	2.229	220.98	161.86	13.02	36.49	4.79	2.82	2.00
1978	2.419	256.58	188.87	14.22	42.85	5.54	2.50	2.60
1979	2.560	301.74	223.65	17.08	50.63	5.13	2.07	3.18
1980	2.637	363.38	268.45	19.79	60.78	6.21	4.32	3.83
1981	2.683	431.89	314.86	23.13	76.24	7.62	5.28	4.76

*Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized and inpatient radiology and pathology charges are reimbursed at 100 percent.

Table A2.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Inpatient radiology and pathology*	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:								
1967	17.750	$109.36	$103.44		$2.47	$1.38	$1.55	$.52
1968	18.038	128.13	117.21	$1.89	3.88	2.41	2.18	.56
1969	18.833	145.58	126.11	6.57	6.74	3.06	2.46	.64
1970	19.312	154.02	131.18	7.14	9.39	3.16	2.39	.76
1971	19.664	162.57	137.72	7.21	11.86	2.63	2.20	.95
1972	20.043	173.14	146.82	6.77	13.28	2.49	2.57	1.21
1973	20.428	186.56	157.43	6.99	14.73	3.01	2.93	1.47
1974	20.988	204.61	171.37	7.44	17.79	2.53	3.60	1.88
1975	21.504	237.06	193.14	8.72	23.46	4.65	4.60	2.49
1976	22.089	272.55	215.26	10.89	31.55	6.17	5.68	3.00
1977	22.605	313.89	242.46	12.21	41.69	7.60	6.33	3.60
1978	23.133	355.04	274.75	14.75	47.76	7.80	5.81	4.17
1979	23.693	399.35	306.46	16.33	57.24	7.75	6.90	4.67
1980	24.287	463.70	355.71	18.70	65.35	8.59	9.75	5.60
1981	24.826	543.45	413.20	22.92	78.09	9.39	12.45	7.40
Disabled (excluding ESRD):								
1974	1.636	174.36	137.48	7.54	21.23	4.22	2.89	1.00
1975	1.813	215.54	172.47	8.40	25.51	4.22	3.38	1.56
1976	2.015	251.94	198.83	10.03	31.21	5.90	3.86	2.11
1977	2.229	305.58	228.75	13.02	51.57	5.42	3.99	2.83
1978	2.419	351.50	264.04	14.22	59.90	6.20	3.50	3.64
1979	2.560	408.25	308.45	17.08	69.83	5.66	2.85	4.38
1980	2.637	485.11	364.88	19.79	82.61	6.75	5.87	5.21
1981	2.683	571.14	423.71	23.13	102.59	8.20	7.10	6.41

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*Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized and inpatient radiology and pathology charges are reimbursed at 100 percent.

Table A3.--COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: HISTORICAL
(In percent)

Year ending June 30,	Increase Due to Price Changes				Increase Due to Residual Factors			Total increase in recognized charges per enrollee
	Increase in physician fee component of CPI	Reduction due to fee screens		Net increase in reasonable charges	Gross residual factors	Effect of denials	Net residual factors	
		Cumulative effect	Yearly changes					
Aged:								
1967	7.6	-2.6						
1968	5.9	-3.6	-0.7	5.2	9.5	-1.4	8.1	13.3
1969	6.2	-5.0	-1.4	4.8	3.2	-0.4	2.8	7.6
1970	6.7	-7.5	-2.8	3.9	3.2	-3.1	0.1	4.0
1971	7.5	-10.1	-3.0	4.5	3.7	-3.2	0.5	5.0
1972	5.2	-11.2	-1.2	4.0	2.2	0.4	2.6	6.6
1973	2.6	-11.7	-0.5	2.1	5.7	-0.6	5.1	7.2
1974	5.0	-13.2	-1.6	3.4	6.1	-0.6	5.5	8.9
1975	12.8	-16.2	-3.6	9.2	3.8	-0.3	3.5	12.7
1976	11.4	-18.6	-2.9	8.5	2.9	0.1	3.0	11.5
1977	10.2	-19.5	-1.0	9.2	3.3	0.1	3.4	12.6
1978	8.9	-19.4	0.5	9.4	3.8	0.1	3.9	13.3
1979	8.6	-20.0	-0.6	8.0	3.8	-0.3	3.5	11.5
1980	11.5	-22.1	-2.4	9.1	6.8	0.1	6.9	16.0
1981	11.1	-24.5	-2.7	8.4	7.1	0.7	7.8	16.2
Disabled (excluding ESRD):								
1974	5.0	-13.2						
1975	12.8	-16.2	-2.6	10.2	15.5	-0.3	15.2	25.4
1976	11.4	-18.6	-2.6	8.8	6.4	0.1	6.5	15.3
1977	10.2	-19.5	-0.7	9.5	5.5	0.1	5.6	15.1
1978	8.9	-19.4	0.6	9.5	5.8	0.1	5.9	15.4
1979	8.6	-20.0	-0.2	8.4	8.7	-0.3	8.4	16.8
1980	11.5	-22.1	-2.2	9.3	8.9	0.1	9.0	18.3
1981	11.1	-24.5	-2.8	8.3	7.1	0.7	7.8	16.1

Bills submitted to the carriers during a 12-month period beginning July 1 are subject, by statute, to certain limitations on the level of fees to be recognized by the program for reimbursement purposes. The fee level recognized for a particular service by a physician is subject to reduction if it exceeds the median charge that the physician assessed for the same service in the preceding calendar year. This median charge is called the "customary" charge. Fees are subject to further reduction if they exceed the "prevailing" charges for the locality. The prevailing charge is defined as the 75th percentile of customary charges for a particular service in a particular locality. Since July 1, 1975, the rate of increase in prevailing charges has been limited further by the application of an "economic index." The customary and prevailing charge limits maintained by the carriers are called "fee screens." Reasonable charges are charges on which reimbursement is based, after they have been reduced by the fee screens.

The average reduction in submitted fees has increased almost every year due both to administrative actions and to differentials in the rate of increase in fees between the calendar year in which the fee screens are established and the July to June period in which the screens are applied. The result is that the net increase in per enrollee charges due to price changes (i.e., the increase in fee levels recognized for reimbursement purposes) has been less than the increase in submitted fees. The second column of table A3 shows the reduction of charges due to the impact of the fee screen operation to date. The year-to-year changes in this impact are shown in the third column.

Per enrollee charges also have increased each year as a result of more physician visits per enrollee, increasing use of specialists and more expensive techniques, and other factors. The fifth column of table A3 shows the increase in charges per enrollee resulting from these residual causes. Because the measurement of increased recognized charges per service is subject to error, this error is included implicitly under residual causes.

The proportion of charges that has been denied as non-covered care has increased in most years. To the extent that this increase in denials reflects the effect of administrative actions defining covered services, it will cause a non-recurring distorting effect on the increase due to net residual factors. The gross residual factor is adjusted for the impact of changes in denials as shown in the sixth column of table A3. This column is used in the projection to indicate the amount of cost increases to be expected in the future from residual causes. The seventh column shows the net increase due to residual factors.

The last column of table A3 shows the total increase in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total recognized charges per enrollee are shown in table A4. Column 1 of table A4 shows the projected average increase in customary charges in each of the 12-month periods ending June 30, 1982 through 1986. As described above, each of these increases depends on the increases in fees actually submitted during the preceding calendar year. Thus, this column represents actual and projected average increases in physicians' fees for calendar years 1980 through 1984, respec-

Table A4.--COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: PROJECTED
(In percent)

Year ending June 30,	Increase before effect of economic index	Reduction due to economic index	Net increase in reasonable charges	Gross residual factors	Effects of denials	Net residual factors	Total increase in recognized charges per enrollee
Alternative A:							
Aged:							
1982	11.7	-0.9	10.8	11.9	0.0	11.9	22.7
1983	10.6	-1.0	9.6	8.8	0.0	8.8	18.4
1984	8.8	-1.9	6.9	7.7	0.0	7.7	14.6
1985	7.1	-1.6	5.5	7.3	0.0	7.3	12.8
1986	5.4	-0.2	5.2	6.2	0.0	6.2	11.4
Disabled (excluding ESRD):							
1982	11.7	-0.9	10.8	16.8	0.0	16.8	27.6
1983	10.6	-1.0	9.6	13.0	0.0	13.0	22.6
1984	8.8	-1.9	6.9	11.1	0.0	11.1	18.0
1985	7.1	-1.6	5.5	10.4	0.0	10.4	15.9
1986	5.4	-0.2	5.2	9.5	0.0	9.5	14.7
Alternative B:							
Aged:							
1982	11.7	-0.9	10.8	11.9	0.0	11.9	22.7
1983	10.6	-1.0	9.6	8.8	0.0	8.8	18.4
1984	8.8	-1.9	6.9	7.7	0.0	7.7	14.6
1985	7.4	-1.7	5.7	7.3	0.0	7.3	13.0
1986	6.2	-0.4	5.8	6.2	0.0	6.2	12.0
Disabled (excluding ESRD):							
1982	11.7	-0.9	10.8	16.8	0.0	16.8	27.6
1983	10.6	-1.0	9.6	13.0	0.0	13.0	22.6
1984	8.8	-1.9	6.9	11.1	0.0	11.1	18.0
1985	7.4	-1.7	5.7	10.5	0.0	10.5	16.2
1986	6.2	-0.4	5.8	9.5	0.0	9.5	15.3

tively. In principle, further adjustments should be made for the year-to-year variations created by the process of selecting the 75th percentile of customary charges for each service in each locality to establish prevailing charges and for the fact that, of necessity, some fees are not screened in exactly the manner described (e.g., when new categories of services arise for which there is no historical data base). The impact on year-to-year increases in reasonable charges of these two factors is treated as negligible (although, of course, they may have some effect on the absolute level of fees). The effects of the economic index on the average charge increase is shown in column 2. The projected net increase in reasonable charges is shown in column 3; this compares with the corresponding historical data shown in column 4 of table A3.

The projection of residual factors assumes no further changes in the proportion of claims denied consistent with the very small changes observed in the last few years (see table A3).

(2) Institutional and Other Services:

The historical and projected increases in charges or costs per enrollee for institutional and other services are shown in table A5. The year-to-year changes in some services have been quite erratic. Because these series provide only a rough indication of future trends in costs, identical series of increase factors are used for alternative A and alternative B.

Table A5.--INCREASES IN RECOGNIZED CHARGES AND COSTS
PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES
(In percent)

Year Ending June 30,	Inpatient radiology and pathology	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:					
Historical:					
1968		57.1	74.6	40.6	7.7
1969	-13.1 *	73.7	27.0	12.8	14.3
1970	8.7	39.3	3.3	-2.8	18.7
1971	1.0	26.3	-16.8	-7.9	25.0
1972	-6.1	12.0	-5.3	16.8	27.4
1973	3.2	10.9	20.9	14.0	21.5
1974	6.4	20.8	-15.9	22.9	27.9
1975	17.2	31.9	83.8	27.8	32.4
1976	24.9	34.5	32.7	23.5	20.5
1977	12.1	32.1	23.2	11.8	20.0
1978	20.8	14.6	2.6	-8.2	15.8
1979	10.7	19.8	-0.6	18.8	12.0
1980	14.5	14.2	10.8	41.3	19.9
1981	22.6	19.5	9.3	27.7	32.1
Projected:					
1982	6.0	15.0	-94.4	25.0	5.0
1983	12.8	14.9	-62.3	25.0	14.8
1984	-0.2	13.0	10.0	25.0	-7.2
1985	15.0	13.7	10.0	20.0	0.8
1986	14.7	14.4	10.0	20.0	10.4
Disabled (excluding ESRD):					
Historical:					
1975	11.4	20.2	0.0	17.0	56.0
1976	19.4	22.3	39.8	14.2	35.3
1977	29.8	65.2	-8.1	3.4	34.1
1978	9.2	16.2	14.4	-12.3	28.6
1979	20.1	16.6	-8.7	-18.6	20.3
1980	15.9	18.3	19.3	106.0	18.9
1981	16.9	24.2	21.5	21.0	23.0
Projected:					
1982	15.0	41.0	-100.0	25.0	5.0
1983	13.4	30.3	0.0	25.0	15.2
1984	-2.1	22.0	0.0	25.0	0.2
1985	16.0	18.5	0.0	20.0	-6.4
1986	13.3	19.0	0.0	20.0	14.0

* Percentage change over prior year annualized value.

d. Projected Charges and Costs:

Table A6 shows projections of per enrollee incurred charges and costs based on the assumptions in tables A4 and A5. Table A7 shows the total reimbursement amounts per enrollee that result from subtracting the average amounts of copayment per enrollee from the total covered charges in table A6. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

2. ESTIMATES FOR PERSONS SUFFERING FROM END STAGE RENAL DISEASE

Certain persons suffering from end stage renal disease (ESRD) have been eligible to enroll for SMI coverage since July 1973 (under Section 299I of Public Law 92-603). For analytical purposes those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The estimates assume that charges for SMI ESRD services under Medicare will increase at an average of 4.3 percent per year under alternative A and 4.6 percent per year under alternative B over the projection period (July 1, 1981 through June 30, 1986). The estimates also assume a continued rapid increase in enrollment. The historical and projected enrollment and costs are shown in table A8.

3. SUMMARY OF AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

Table A9 shows aggregate historical and projected reimbursement amounts on a cash basis, by type of beneficiary. The difference between

Table A6.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: PROJECTED

Year ending June 30,	All services	Physician	Inpatient radiology and pathology	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Alternative A:							
Aged:							
1982	$ 645.09	$507.13	$24.30	$ 89.80	$ .53	$15.56	$ 7.77
1983	759.57	600.44	27.42	103.14	.20	19.45	8.92
1984	864.69	687.98	27.37	116.53	.22	24.31	8.28
1985	977.42	775.71	31.47	132.48	.24	29.17	8.35
1986	1,096.05	863.90	36.09	151.58	.26	35.00	9.22
Disabled (excluding ESRD):							
1982	727.54	540.68	26.60	144.65	.00	8.88	6.73
1983	900.49	663.07	30.15	188.42	.00	11.10	7.75
1984	1,063.72	782.73	29.52	229.83	.00	13.88	7.76
1985	1,237.87	907.39	34.25	272.30	.00	16.66	7.27
1986	1,431.67	1,040.47	38.80	324.12	.00	19.99	8.29
Alternative B:							
Aged:							
1982	645.09	507.13	24.30	89.80	.53	15.56	7.77
1983	759.57	600.44	27.42	103.14	.20	19.45	8.92
1984	864.69	687.98	27.37	116.53	.22	24.31	8.28
1985	979.34	777.63	31.47	132.48	.24	29.17	8.35
1986	1,102.80	870.65	36.09	151.58	.26	35.00	9.22
Disabled (excluding ESRD):							
1982	727.54	540.68	26.60	144.65	.00	8.88	6.73
1983	900.49	663.07	30.15	188.42	.00	11.10	7.75
1984	1,063.72	782.73	29.52	229.83	.00	13.88	7.76
1985	1,240.11	909.63	34.25	272.30	.00	16.66	7.27
1986	1,439.79	1,048.59	38.80	324.12	.00	19.99	8.29

Table A7.--INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Alternative A:			
Aged:			
1982	25.363	$ 476.55	$12,087
1983	25.897	561.24	14,534
1984	26.440	643.76	17,021
1985	27.025	733.63	19,826
1986	27.646	828.41	22,902
Disabled (excluding ESRD):			
1982	2.682	546.89	1,467
1983	2.583	677.65	1,750
1984	2.514	806.08	2,026
1985	2.513	944.99	2,375
1986	2.482	1,099.56	2,729
Alternative B:			
Aged:			
1982	25.363	476.55	12,087
1983	25.897	561.24	14,534
1984	26.440	643.76	17,021
1985	27.025	735.18	19,868
1986	27.646	833.80	23,051
Disabled (excluding ESRD):			
1982	2.682	546.89	1,467
1983	2.583	677.65	1,750
1984	2.514	806.08	2,026
1985	2.513	946.88	2,380
1986	2.482	1,106.06	2,745

Table A8.--INCURRED REIMBURSEMENT AMOUNTS FOR END STAGE RENAL DISEASE

Year ending June 30,	Disabled ESRD and ESRD only			ESRD only
	Average enrollment (thousands)	Reimbursement amounts		Reimbursement amounts
		Per enrollee	Aggregate (millions)	Aggregate (millions)
Alternative A:				
1974	14	$10,071	$141	$ 98
1975	21	10,857	228	155
1976	27	11,852	320	209
1977	31	13,516	419	267
1978	36	14,611	526	330
1979	41	15,756	646	399
1980	48	16,229	779	474
1981	53	17,472	926	557
1982	57	18,912	1,078	641
1983	61	19,557	1,193	701
1984	63	18,984	1,196	688
1985	65	19,138	1,244	703
1986	67	19,866	1,331	743
Alternative B:				
1974	14	10,071	141	98
1975	21	10,857	228	155
1976	27	11,852	320	209
1977	31	13,516	419	267
1978	36	14,611	526	330
1979	41	15,756	646	399
1980	48	16,229	779	474
1981	53	17,472	926	557
1982	57	18,912	1,078	641
1983	61	19,590	1,195	702
1984	63	19,048	1,200	690
1985	65	19,308	1,255	709
1986	67	20,179	1,352	755

Table A9.--AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS
(In millions)

Fiscal year	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical:				
1967	$ 664			$ 664
1968	1,390			1,390
1969	1,645			1,645
1970	1,979			1,979
1971	2,035			2,035
1972	2,255			2,255
1973	2,391			2,391
1974	2,652	$ 132	$ 90	2,874
1975	3,341	257	167	3,765
1976	4,074	339	259	4,672
Interim*	1,083	106	80	1,269
1977	4,992	494	381	5,867
1978	5,776	606	470	6,852
1979	6,903	762	594	8,259
1980	8,467	957	720	10,144
1981	10,326	1,171	848	12,345
1982	12,290	1,496	1,020	14,806
Projected:				
Alternative A:				
1983	14,646	1,757	1,134	17,537
1984	17,215	2,056	1,139	20,410
1985	20,027	2,396	1,198	23,621
Alternative B:				
1983	14,646	1,757	1,134	17,537
1984	17,223	2,057	1,142	20,422
1985	20,085	2,403	1,207	23,695

*Interim Period is the period from July 1, 1976 to September 30, 1976 and is the transitional period between fiscal years beginning July 1 and fiscal years beginning October 1.

reimbursement amounts on a cash basis and incurred reimbursement amounts results from the lag between the time of service and the time of payment.

4. ADMINISTRATIVE EXPENSE

The ratio of administrative expenses to benefit payments has been approximately 6 percent in recent years and is projected to decline slowly in future years. Projections of administrative costs are based on estimates of workloads and approved budgets for carriers, intermediaries and Federal administration agencies.

APPENDIX B

STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE STANDARD MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JULY 1983 *

1. Actuarial Status of the Supplementary Medical Insurance Trust Fund

The law requires that the SMI program be financed on an incurred basis. That is, program income during the 12-month period for which the actuarial rates are effective must be sufficient to pay for services furnished during that period (including associated administrative costs) even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover benefits not paid until after the close of the 12-month period is added to the trust fund until needed. Thus, the assets in the trust fund at any time should be no less than benefit and administrative costs incurred but not yet paid.

Because the rates are established prospectively, they are subject to projection error. As a result, the income to the program may not equal incurred costs. Therefore, trust fund assets should be maintained

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*This statement appeared in the Federal Register of December 30, 1982. Projections shown in this statement differ from the projections shown in the rest of the report because of minor changes in assumptions since the rates were announced. In addition, Public Law 98-21 changed the financing basis for the SMI program to a calendar year basis, effective January 1, 1984. The monthly premium for the period July 1, 1983 through December 31, 1983 was frozen at $12.20 (the premium applicable for June 1983). The actuarial rates promulgated in this notice would apply to this 6-month period.

TABLE 1—ACTUARIAL STATUS OF THE SMI TRUST FUND
12-MONTH PERIOD ENDING JUNE 30 OF 1981-1983
(In Millions)

12-Month Period Ending June 30,	Assets	Liabilities	Assets Less Liabilities
1981	$3,801	$3,470	$ 331
1982	5,535	3,887	1,648
1983	6,736	4,670	2,066

at a level that is adequate to cover a moderate degree of projection error in addition to the amount of incurred but unpaid expenses. Table 1 summarizes the estimated actuarial status of the trust fund as of June 30 for each of the years 1981 through 1983.

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

The monthly actuarial rate is one-half the monthly projected cost of benefits and administrative expenses for each enrollee age 65 and older, adjusted to allow for interest earnings on assets in the trust fund and a contingency margin. The contingency margin is an amount appropriate to provide for a moderate degree of projection error and to amortize unfunded liabilities.

The monthly actuarial rate for enrollees age 65 and older for the 12-month period ending June 30, 1984, was determined by projecting per-enrollee costs for the 12-month period ending June 30, 1981, by type of service. The projected costs for the 12-month periods ending June 30 of 1981-1984 are shown in Table 2. The values for the 12-month period ending June 30, 1981, were established from program data. Subsequent periods were projected using a combination of program data and data from external sources. The projection factors used are shown in Table 3.

TABLE 2.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER
12-MONTH PERIODS ENDING JUNE 30 OF 1981-1984

	1981	1982	1983	1984
Covered services (at level recognized):				
Physicians' reasonable charges	$17.22	$21.13	$24.86	$28.37
Radiology and pathology	.96	1.01	1.02	1.03
Outpatient hospital and other institutions	3.25	3.74	4.30	4.90
Home health agencies	.39	.02	.01	.01
Group practice prepayment plans	.52	.65	.81	1.01
Independent lab	.31	.32	.37	.43
Total services	22.65	26.87	31.37	35.75
Cost sharing:				
Deductible	-1.88	-2.29	-2.48	-2.50
Coinsurance	-3.89	-4.74	-5.73	-6.65
Total benefits	16.88	19.84	23.16	26.60
Administrative expenses	1.01	1.04	1.09	1.15
Incurred expenditures	17.89	20.88	24.25	27.75
Value of interest on fund	-.30	-.42	-.58	-.66
Contingency margin for projection error and to amortize unfunded liabilities	-1.29	2.14	.93	-.09
Monthly actuarial rate	$16.30	$22.60	$24.60	$27.00

TABLE 3.--PROJECTION FACTORS 1/
12-MONTH PERIODS ENDING JUNE 30 OF 1982-1984
(In percent)

12-month period ending June 30,	Physicians' services		Radiology and pathology	Outpatient hospital services	Home health agency services	Group practice prepayment plans	Independent lab services
	Fees 2/	Residual 3/					
Aged:							
1982	10.8	10.8	6.0	15.1	-94.4	25.0	5.0
1983	9.6	7.4	.9	14.9	-62.3	25.0	15.0
1984	7.4	6.3	.5	13.7	10.0	25.0	15.0
Disabled:							
1982	10.8	15.2	15.0	41.3	-100.0	25.0	5.0
1983	9.6	11.1	1.3	30.3	0.0	25.0	15.0
1984	7.4	9.4	.5	24.9	0.0	25.0	15.0

1/ All values are per enrollee. Also, some values for 1982 and 1983 differ significantly from those contained in last year's notice due to an additional year's data which support the current values and due to the implementation of the provisions of the Tax Equity and Fiscal Responsibility Act of 1982, Public Law 97-248.

2/ As recognized for payment under the program.

3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for enrollees age 65 and over for the 12-month period ending June 30, 1984, is $27.75. The monthly actuarial rate of $27.00 provides an adjustment for interest earnings and $-.09 for a contingency margin. This margin is negative since there is already a more than moderate excess of assets over liabilities for the program as a whole.

3. Monthly Actuarial Rate for Disabled Enrollees

Disabled enrollees are those persons enrolled in SMI because of entitlement to disability benefits for not less than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly costs for disabled enrollees (other than those suffering from end stage renal disease) are prepared in a fashion exactly parallel to projections for the aged, using appropriate actuarial assumptions (see Table 3). Costs for the end-stage renal disease program are projected using using a different computer model because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table 4.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for the 12-month period ending June 30, 1984, is $53.60. The monthly actuarial rate of $46.10 provides an adjustment for interest earnings and $-4.47 for a contingency margin. This margin is negative since there is already a more than moderate excess of assets over liabilities for the disabled.

TABLE 4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES 12-MONTH PERIODS ENDING JUNE 30 OF 1981-1984

	1981	1982	1983	1984
Covered services (at level recognized):				
Physicians' reasonable charges	$21.02	$26.38	$31.58	$36.39
Radiology and pathology	.96	1.11	1.12	1.13
Outpatient hospital and other institutions	18.02	22.01	25.42	27.92
Home health agencies	.34	.00	.00	.00
Group practice prepayment plans	.30	.37	.46	.58
Independent lab	.39	.42	.47	.53
Total services	41.03	50.29	59.05	66.55
Cost Sharing:				
Deductible	-1.64	-2.09	-2.31	-2.34
Coinsurance	-7.62	-9.44	-11.29	-12.83
Total benefits	31.77	38.76	45.45	51.38
Administrative expenses	1.90	2.03	2.13	2.22
Incurred expenditures	33.67	40.79	47.58	53.60
Value of interest and other income on fund	-2.95	-3.26	-3.09	-3.03
Contingency margin for projection error and to amortize unfunded liabilities	-5.22	-.93	-2.39	-4.47
Monthly actuarial rate	$25.50	$36.60	$42.10	$46.10

4. Sensitivity Testing

Several factors contribute to uncertainty about future trends in medical care costs. In view of this, it seems appropriate to test the adequacy of the rates announced here using alternative assumptions. The most unpredictable factors that contribute significantly to future costs are outpatient hospital costs, physician residual (measured indirectly and reflecting the use of more visits per enrollee, the use of more expensive services, and other factors not explained by simple price per service increases), and increases in physician fees as constrained by the program's reasonable charge screens and economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table 5. All assumptions not shown in Table 5 are the same as in Table 3.

Table 5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of $1,723 million by the end of June 1984. This amounts to 7.0 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic, and therefore which indicate the degree that assets can accommodate projection errors, produce a deficit of $1,057 million by the end of June 1984, which amounts to a deficit of 3.8 percent of the estimated total incurred expenditures for the following year. Under fairly optimistic assumptions, the monthly actuarial rates will result in an excess of $4,426 million, which amount to 20.0 percent of the estimated total incurred expenditures for the following year.

TABLE 5.—PROJECTION FACTORS AND THE ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER ALTERNATIVE SETS OF ASSUMPTIONS
12-MONTH PERIODS ENDING JUNE 30 OF 1982-1984

	This Projection			Low Cost Projection			High Cost Projection		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Projection factors (in percent): 1/									
Physician services-fees 2/									
Aged	10.8	9.6	7.4	10.3	9.1	6.9	11.3	10.1	7.9
Disabled	10.8	9.6	7.4	10.3	9.1	6.9	11.3	10.1	7.9
Physician services-residual 3/									
Aged	10.8	7.4	6.3	9.8	5.4	4.3	11.8	9.4	8.3
Disabled	15.2	11.1	9.4	13.2	6.1	4.4	17.2	16.1	14.4
Outpatient hospital services									
Aged	15.1	14.9	13.7	12.1	7.9	3.7	18.1	21.9	23.7
Disabled	41.3	30.3	24.9	33.3	20.3	14.9	49.3	40.3	34.9
Actuarial status (in millions):									
Assets	$5,535	$6,736	$7,042	$5,535	$7,430	$9,234	$5,535	$6,029	$4,800
Liabilities	3,887	4,670	5,319	3,657	4,321	4,808	4,117	5,027	5,857
Assets less liabilities	$1,648	$2,066	$1,723	$1,878	$3,109	$4,426	$1,418	$1,002	$-1,057
Ratio of assets less liabilities to expenditures (in percent) 4/	9.1	9.8	7.0	10.8	15.9	20.0	7.5	4.4	-3.8

1/ All values are per enrollee. Also, some values for 1982 and 1983 differ significantly from those contained in last year's notice due to an additional year's data which support the current values and due to the implementation of the provisions of the Tax Equity and Fiscal Responsibility Act of 1982, P.L. 97-248.

2/ As recognized for payment under the program.

3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.

4/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

5. Standard Premium Rate

For the 12-month periods ending June 1984 and June 1985, the law provides that the standard monthly premium rate for both aged and disabled enrollees shall be 50 percent of the monthly actuarial rate for enrollees age 65 and older. Therefore, the standard monthly premium rate for both aged and disabled enrollees for the period July 1, 1983, through June 30, 1984, is $13.50, 50 percent of this monthly actuarial rate ($27.00).

APPENDIX C

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Supplementary Medical Insurance Trust Fund, taking into account the experience and expectations of the program.

Roland E King

Roland E. King
Fellow of the Society of Actuaries
Member of the American Academy of Actuaries
Director, Office of Financial and Actuarial Analysis
Health Care Financing Administration

SOCIAL SECURITY

Old-Age, Survivors, and Disability Insurance Program

SUMMARY OF THE 1983 TRUSTEES REPORT

JUNE 24, 1983

OFFICE OF THE ACTUARY
SOCIAL SECURITY ADMINISTRATION

SUMMARY OF THE
1983 SOCIAL SECURITY TRUSTEES REPORT:
OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM

EXECUTIVE SUMMARY

The Social Security Amendments of 1983 have restored the financial integrity of the Social Security cash benefit program for many years into the future. The program is now estimated to be adequately financed during this decade based on all four sets of actuarial assumptions used in the 1983 Trustees Report. On the basis of all but the most pessimistic of the four sets of assumptions used, the program is now estimated to be financially sound over the next 75 years.

This year's short-range projections are in marked contrast to those of the last three years, which indicated that the largest of the Social Security trust funds—the Old-Age and Survivors Insurance Trust Fund—was rapidly nearing a point at which benefits could not be paid on time. Before enactment of the 1983 amendments, the fund assets were adequate to pay OASI benefits through June 1983 only because of temporary legislative changes, including interfund borrowing authority under which loans were made from the Disability Insurance and Hospital Insurance Trust Funds in the latter part of 1982.

As a result of the 1983 amendments, actuarial projections now show that benefits can be paid on time throughout the 1980's and for many years thereafter. However, the trust fund levels are projected to be relatively low through 1987. Thus if economic conditions during the next few years are worse than those projected under the pessimistic set of assumptions, it is possible for Social Security again to experience financial difficulties in the near future. After 1987 the program's ability to withstand economic downturns is projected to improve steadily. The interfund loans that were made in 1982 are expected to be repaid before 1990 as required by law.

This year's long-range projections are in marked contrast to those of the last decade, which indicated substantial deficits over the 75-year projection period. On the basis of all but the most pessimistic of the four sets of assumptions used to develop the projections, the average yearly income rate would exceed the average yearly cost rate as a percentage of taxable payroll over the next 75 years.

The OASDI program now is in long-range actuarial balance on the basis of the intermediate-B assumptions. This actuarial balance reflects substantial year-by-year surpluses developed during the first half of the 75-year projection period, which slightly outweigh substantial deficits later on. The actuarial balance is a moving average that is recomputed each year, and continuing review of OASDI financing is necessary.

1. INTRODUCTION

Two separate parts of the Social Security cash benefit program pay monthly benefits to workers and their families:

(1) **Old-Age and Survivors Insurance** (OASI) pays benefits after a worker retires or dies.

(2) **Disability Insurance** (DI) pays benefits after a worker becomes disabled.

The two parts, OASI and DI, together are referred to as OASDI.

The Social security program is financed essentially on a pay-as-you-go basis. That is, taxes paid into the program currently are used to pay benefits to current beneficiaries. However, Social Security does maintain trust funds that hold all assets not needed currently to pay benefits and administrative expenses. Social Security funds may not be used for any other purpose.

The Secretaries of the Treasury, Labor, and Health and Human Services now serve as trustees of the Social Security trust funds. They report annually to the Congress on the condition of each fund and on projected future results.

The 1983 Annual Report for the OASI and DI Trust Funds is summarized here. The figures given in this summary, on a calendar year basis, are for the program as it is now structured following enactment of the Social Security Amendments of 1983.

Single copies of the complete annual report for OASDI can be obtained without charge from the Social Security Administration, Office of Public Inquiries, 4100 Annex, Baltimore, Maryland 21235.

OASDI Income and Trust Funds

Most OASDI revenue comes from payroll taxes paid by employees, their employers, and the self-employed. (Additional payroll taxes go into a separate trust fund for the Hospital Insurance (HI) part of Medicare. Because this summary focuses on OASDI, it does not discuss Medicare except in the context of interfund borrowing.)

Table 1 shows the OASDI payroll tax rates for employers and employees, as established by law. Taxes at these rates are paid on each worker's earnings up to $35,700 in 1983. In future years, this Social Security earnings base will rise as average wages increase. For the self-employed, the 1983 OASDI tax rate is about 1¾ times the rate for employees, and after 1983 it is the same as the combined employer-employee rate.

During 1984 a tax credit is allowed to employees to offset the increase of 0.3 percentage points over the 1983 OASDI tax rate. Certain tax credits are also allowed to the self-employed over the next few years to provide a transition to the new higher rates, and thereafter to provide parity with employees on an after-tax basis.

Table 1.—Payroll Tax Schedule

Year	Contribution rates (percent of taxable earnings) payable by employer and employee, each		
	OASI	DI	Total
1983	4.775	0.625	5.40
1984-87	5.200	0.500	5.70
1988-89	5.530	0.530	6.06
1990-99	5.600	0.600	6.20
2000 & later	5.490	0.710	6.20

The trust funds serve as a contingency reserve to absorb temporary fluctuations in income and outgo. When income exceeds outgo, the excess builds up the trust funds. When outgo exceeds income, the trust funds are drawn down. The trust funds are invested in U.S. government securities bearing rates of interest similar to those for long-term securities issued to the general public.

The exact timing of income and outgo can be important under pay-as-you-go financing. In order to match OASDI income with outgo more closely, in May 1983 the so-called normalized crediting of taxes took effect. This provides that Treasury advances to the Social Security funds each month's payroll tax receipts at the beginning of the month when benefits are paid. The Social Security funds pay interest to Treasury for the extra days the funds have the money.

After 1983, taxation of benefits will provide another significant source of Social Security income. This tax is to be collected by Treasury throughout each year, and paid in advance from Treasury to the Social Security funds every calendar quarter.

The law also permits limited interfund borrowing among the OASI, DI and HI funds through 1987; such loans must be repaid with interest before 1990. Also, OASDI tax rates were recently reallocated between OASI and DI to put both funds in approximately the same financial condition.

2. SOCIAL SECURITY AMENDMENTS OF 1983

During the past year several new laws were enacted that changed the Social Security program. By far the most important of these was the Social Security Amendments of 1983, which followed closely the recommendations of the National Commission on Social Security Reform that had been appointed by the President to find ways to strengthen Social Security financing. The main provisions of the 1983 amendments are listed below.

1. Coverage of newly hired Federal employees.
2. Coverage of employees of nonprofit employers.
3. Ban on termination of coverage of State and local government employees.
4. Six-month delay in cost-of-living adjustments.
5. Modification of cost-of-living increases during periods of low trust fund balances (stabilizer provision).
6. Normalized tax transfers.
7. Extension of interfund borrowing authority.
8. Elimination of windfall benefits (for workers receiving pensions from noncovered employment).
9. Increase in normal retirement age after the year 2000.
10. Increase in delayed retirement benefits.
11. Reduced withholding rate under the retirement test.
12. Taxation of Social Security benefits.
13. Changes in tax rate schedule.
14. Acceleration of State and local tax collections.
15. Increase in benefits for certain surviving, divorced and disabled spouses.
16. Change in financing basis of noncontributory military service wage credits.
17. Reimbursement of Social Security funds for uncashed checks.
18. Change in public pension offset (for spouses with pensions from noncovered employment).
19. Taxation of contributions under salary reduction plans.
20. Suspension of benefits to certain nonresident aliens.
21. Expanded use of death certificates.
22. Other changes without significant cost impact, including provision for two more OASDI trustees from outside the government.

3. RECENT FINANCIAL RESULTS

Table 2 presents a summary of 1982 financial results for OASDI, including the cash income (or revenue), outgo (or disbursements or cost), and changes in assets during 1982, with 1981 results shown for comparative purposes.

Table 2.—Results of Financial Operations During 1982
[Billions]

	1982 Results			1981 OASDI Results
	OASI	DI	OASDI	
Trust Fund assets on January 1....	$21.5	$3.0	$24.5	$26.5
Income during year:				
Payroll taxes	123.7	22.0	145.7	139.4
Interest	0.8	0.5	1.4	2.2
General fund reimbursements	0.7	0.2	0.9	0.8
Total income	125.2	22.7	147.9	142.4
Outgo during year:				
Benefit payments	138.8	17.4	156.2	141.0
Administration, including rehabilitation	1.5	0.6	2.1	1.7
Transfer to Railroad Retirement Account	1.8	(1)	1.8	1.6
Total outgo	142.1	18.0	160.1	144.4
Interfund loans: amounts received	17.5	-5.1	12.4	—
Net change in Trust Fund during year	0.6	-0.4	0.2	-1.9
Trust Fund assets on December 31	22.1	2.7	24.8	24.5

[1] Less than $0.05 billion.

Note: Components may not add to totals due to rounding.

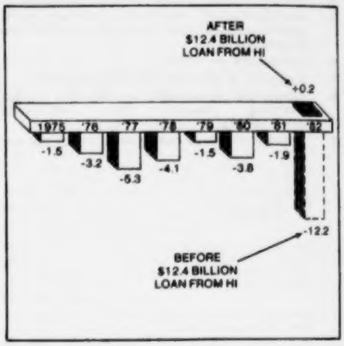
In 1982 interfund borrowing was used for the first time, with OASI borrowing $17.5 billion from DI and HI in order to pay the November and December 1982 benefits, and to continue all benefit payments through mid-1983.

Administrative expenses for OASDI in 1982 were 1.3 percent of outgo.

Chart A shows that 1982 was the first year since 1974 that the combined OASDI funds increased. However, the 1982 increase of $0.2 billion includes a $12.4 billion loan from the HI fund; without this loan the OASDI funds would have decreased by about $12 billion, or 1 percent of taxable payroll.

CHART A

OASDI DEFICITS & SURPLUS, 1975-82
($ Billions)



4. ACTUARIAL COST PROJECTIONS

The annual report contains 75-year projections of each fund's estimated financial operations and status. Because precise prediction of the future is not possible, alternative sets of reasonable assumptions are used to make short- and long-range estimates that indicate the trend and general range of future costs. Future costs could, however, fall outside the range indicated by these assumptions.

Assumptions Used

Future OASDI income and outgo will depend on mortality, fertility, unemployment, inflation and other economic and demographic factors. Demographic factors affect the numbers of people paying Social Security taxes and receiving benefits, while economic factors affect the levels of these people's wages and Social Security benefits.

This year's cost projections are prepared using four alternative sets of assumptions regarding these factors, called "optimistic", "intermediate-A", "intermediate-B", and "pessimistic" sets of assumptions.

Intermediate-A assumes future economic performance resembling the experience in periods of more robust economic growth, while intermediate-B assumes less robust economic growth. Both intermediate projections use the same demographic assumptions.

Appendix A shows selected values of several assumptions used in the four basic projections, and describes these assumptions more fully.

Measures of Actuarial Status

In analyzing the financing status of the program, several measures of actuarial status are commonly used.

The **fund ratio** is the amount in the trust fund at the beginning of a year expressed as a percentage of that year's expenditures. For example, a fund ratio of 25 percent means that the amount in the fund is one-fourth of annual outgo (or enough to pay benefits for about three months in the absence of any income). At the beginning of 1983, the fund ratios for OASI and DI were both 15 percent. Of course, the ratio for any year can only be estimated before the year is completed and the amount of expenditures is known. A fund ratio below 8 percent would represent less than one month's benefit outgo, and thus would usually imply inability to pay benefits on time. In practice, to assure payment of benefits in the short range, higher levels would be needed because OASDI income and outgo fluctuate during the year, and because unforeseen changes in the economy may cause the trust funds to drop unexpectedly. A new stabilizer provision takes effect at the end of 1984 to help avoid the need for hasty legislative action to assure payment of benefits on time; should the trust fund ratio fall below 15 percent (20 percent after 1988), annual benefit increases will be based on the lower of wage or price increases, instead of on price increases alone, with provision for higher benefit increases later to catch up with price increases.

The **cost rate** is the annual outgo or disbursements as a percentage of taxable payroll. Also, the **total income rate** (or simply the **income rate**) is the combined OASDI employee-employer payroll tax rate scheduled in the law plus the rate of income from taxation of benefits, expressed as a percentage of taxable payroll. Over a period of time, the average cost and income rates can be compared directly to measure the adequacy of financing. For the entire long-range projection period of 75 years, the **actuarial balance** is the difference between the average income rate and the average cost rate. If this actuarial balance is positive, the system is said to have an actuarial surplus, and if negative, an actuarial deficit. Such a deficit is a warning that long-range financing may need to be strengthened, although it does not give a complete picture without the other measures of financing discussed here. The program is in "**close actuarial balance**" over the long-range period if the average income rate is between 95 percent and 105 percent of the average cost rate.

5. SHORT-RANGE FINANCING (1983-87)

Projections over the next 5 years are used by the Congress and the Administration to monitor OASDI financing. In this short-range picture, the numbers of persons receiving OASDI benefits can be forecast closely. However, changes in the national economy can have major effects on outgo and income, and are difficult to predict.

This year's report shows that under all four projections OASDI can pay benefits on time throughout this 5-year period. This is in marked contrast to the situation shown in recent years' reports, which indicated that reserves were rapidly being depleted.

Chart B shows the year-by-year OASDI surplus projected during 1983-90 by the intermediate-B assumptions. The amounts shown are lower than they would otherwise be because of repayment during these years of the $12.4 billion borrowed from HI by the OASDI funds.

CHART B

OASDI SURPLUS, 1983-90
($Billions, Projected by Intermediate-B Assumptions)

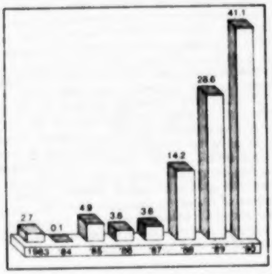
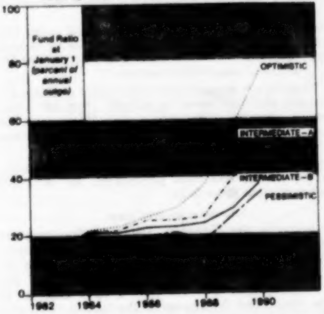


Chart C shows the projected progress of OASDI fund ratios under all four sets of assumptions during 1982-90. As of January 1, 1983, the ratio was 15 percent for OASDI. (Both the OASI and DI fund ratios also were 15 percent.) During 1983 the fund ratio jumps to the 21-22 percent level, reflecting both the normalized crediting of taxes and a lump sum payment to OASDI for military service credits. Then for several years the OASDI fund ratio is projected to grow slowly, reaching 30 percent between 1988 and 1990. After that, reserves are projected to build up more rapidly, reflecting higher payroll tax rates. Thus during the next few years margins of safety are thin; thereafter the funds are less vulnerable to the adverse effects of an economic downturn.

CHART C

OASDI FUND RATIOS
(Using alternative sets of assumptions)



Under all four sets of assumptions the $5.1 billion borrowed from the DI fund would be fully repaid, with interest, in 1988 or 1989. The $12.4 billion borrowed from the HI fund would be fully repaid, with interest, in 1987 or 1988; under the pessimistic assumptions this loan would be repaid in 1987 when needed by the HI fund to pay benefits.

6. LONG-RANGE FINANCING (1983-2057)

Long-range cost estimates for OASDI over the next 75 years, although sensitive to variations in the assumptions, give the best available indication of the trend and general range of the program's future cost. In this long-range period Social Security costs should tend to respond largely to demographic conditions. Most of the beneficiaries during the next 75 years have already been born, so that their numbers are projected mainly from the present population. The numbers of workers involved in these projections, however, depend on future birth rates, which are subject to more variability. Several important long-range demographic trends, already under way, are anticipated to raise the proportion of the aged in the population in the next 75 years:

(1) Because of the large number of persons born shortly after World War II, rapid growth is expected in the aged population after the turn of the century.

(2) At the same time, low birth rates would hold down the number of young people.

(3) Projected improvements in mortality also would increase the numbers of aged persons.

Table 3 illustrates the improvement in life expectancies that is anticipated, based on the intermediate assumptions.

Table 3.—Past and Projected Life Expectancies[1]

Year	At birth		At age 65	
	Male	Female	Male	Female
1940	60.9	65.3	11.9	13.4
1960	66.6	73.2	12.6	15.9
1980	69.8	77.5	14.0	18.3
2000	73.4	81.0	15.7	20.8
2020	74.4	82.2	16.4	21.7
2040	75.4	83.3	17.2	22.6
2060	76.3	84.4	17.9	23.6

[1] Life expectancy is the average number of years of life remaining, based on the death rates at each age in the year shown. Rates are based on census data up to 1980, projected beyond 1980 by the intermediate assumptions.

Chart D shows fertility rates from 1940 on, projected over the next 75 years by the three sets of demographic assumptions. The post-World War II baby boom shows up clearly, followed by the historically low fertility rates of recent years.

CHART D

TOTAL FERTILITY RATES

(Actual and projected)

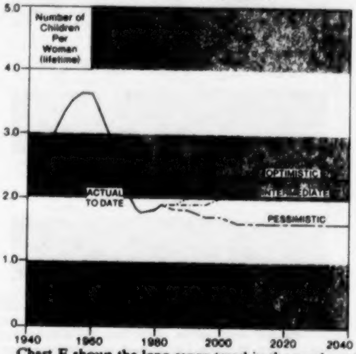


Chart E shows the long-range trend in the number of covered workers for each OASDI beneficiary, based on the three sets of demographic assumptions. ("Beneficiaries" includes not only retired workers, but also disabled workers, spouses, children and survivor beneficiaries.) This ratio has fallen from 5.1 in 1960 to 3.2 currently. It is estimated to reach a level of about 2 by the middle of the next century, as the number of beneficiaries increases more rapidly than the number of covered workers.

CHART E

NUMBER OF WORKERS PER OASDI BENEFICIARY

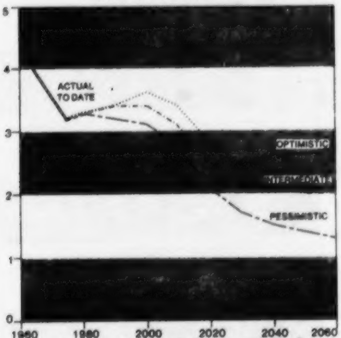


Table 4 shows the trend in the estimated annual OASDI cost rate (outgo as a percentage of taxable payroll) under each of the four sets of assumptions during the next 75 years. Under each set of assumptions, the cost rate increases rapidly after the turn of the century. Under the intermediate and optimistic sets of assumptions, the outgo in relation to taxable payroll is fairly level or decreasing after 2030, while under the pessimistic assumptions the outgo is still increasing at the end of the 75-year period.

Table 4.—Estimated Long-Range OASDI Cost Rates
[Percentage of Taxable Payroll]

Year	Optimistic	Intermediate -A	Intermediate -B	Pessimistic
1983	11.46	11.49	11.49	11.62
1990	10.15	10.70	11.27	11.38
2000	8.14	9.32	10.06	11.25
2010	8.22	9.57	10.31	11.93
2020	10.02	11.91	12.76	15.43
2030	11.00	13.71	14.73	19.17
2040	10.60	14.05	15.17	21.71
2050	10.16	14.13	15.27	23.82
2057	10.07	14.28	15.42	25.06

Chart F shows the estimated OASDI cost rates and income rates over the next 75 years based on the intermediate-B assumptions. During the first half of this period the projection shows that income will generally exceed outgo, developing a substantial surplus each year. After about 2020 the reverse is true, with outgo exceeding income and thus generating substantial deficits. Over the entire period such surpluses and deficits are approximately in balance.

After 1990, when the scheduled employee-employer payroll tax rate has leveled off at 12.4 percent, the income rate continues to rise slightly as a result of taxation of benefits—from 12.7 percent in 1990 to 13.2 percent in 2060 under the intermediate-B assumptions.

CHART F

INCOME RATES VS. COST RATES
(Intermediate—B assumptions)

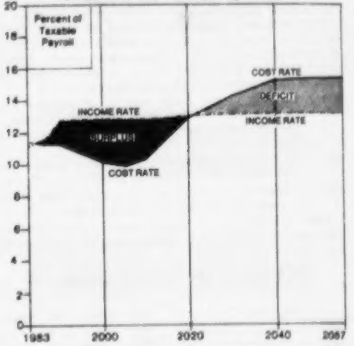


Table 5 compares the estimated OASDI cost rates and income rates for the next 75 years under the four alternative sets of assumptions. The estimated average annual income rate for the entire 75-year projection period exceeds the average annual cost rate for the period by 0.84 percent of taxable payroll under intermediate-A and 0.02 percent under intermediate-B. Thus under intermediate-B the OASDI program now is in close actuarial balance, and has eliminated the large deficit that was projected a year ago.

Table 5.—Estimated 75-Year Average OASDI Cost Rates, Income Rates, Actuarial Balance
[Percentage of Taxable Payroll]

Set of assumptions	Income rate	Cost rate[1]	Actuarial balance[2]
Optimistic	12.73	9.81	2.92
Intermediate-A	12.83	11.99	0.84
Intermediate-B	12.87	12.84	0.02
Pessimistic	13.04	16.56	-3.51

[1] Cost rate is the estimated outgo as a percentage of taxable payroll.

[2] Actuarial balance is the difference between the income rate and the cost rate before rounding.

Appendix B is an index to certain key tables in the complete annual report for 1983. Other tables in the report give technical data and results by fiscal years.

APPENDICES

APPENDIX A

Economic and Demographic Assumptions

The table below shows selected values of several assumptions used in the 1983 OASDI Traitees Report.

Year	Percentage increase over previous year in average annual— Real GNP[1]	Wages in covered employment	Consumer price index	Average percentage unemployed	Total fertility rate[2]
	Optimistic Assumptions				
1983	3.4	4.3	2.5	10.0	1.8
1984	5.7	5.2	3.3	8.6	1.9
1985	5.1	5.3	3.7	7.5	1.9
1995	3.8	4.5	2.0	4.0	2.1
2005 & later	3.6	4.5	2.0	4.0	2.3
	Intermediate-A Assumptions				
1983	3.1	4.3	2.7	10.0	1.8
1984	4.8	5.0	3.6	8.8	1.9
1985	4.1	4.8	4.0	7.9	1.9
1995	3.3	5.0	3.0	5.0	1.9
2005 & later	3.1	5.0	3.0	5.0	2.0
	Intermediate-B Assumptions				
1983	2.4	4.6	3.1	10.1	1.8
1984	4.1	4.6	4.4	9.1	1.9
1985	3.7	5.5	5.3	8.3	1.9
1995	2.6	5.5	4.0	5.5	1.9
2005 & later	2.6	5.5	4.0	5.5	2.0
	Pessimistic Assumptions				
1983	0.5	3.9	3.3	10.5	1.8
1984	1.7	4.6	6.4	10.5	1.8
1985	3.9	7.4	7.7	9.5	1.8
1995	2.1	6.0	5.0	6.5	1.7
2005 & later	2.1	6.0	5.0	6.5	1.6

[1] Gross National Product (the total output of goods and services) expressed in constant dollars. The percentage increase in real GNP is assumed to change after the year 2005. The values for the year 2060 are 3.2, 2.3, 1.9 and 0.8 percent for the optimistic, intermediate-A, intermediate-B, and pessimistic assumptions, respectively.

[2] The number of children who would be born to a woman in her lifetime based on the birth rates at each age in the year shown (if she were to survive the entire child-bearing period).

APPENDIX B

Guide To Key Tables in the 1983 Trustees Report for OASDI

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11	Demographic Assumptions	40
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Summary of the 1983 Annual Reports of the Medicare Board of Trustees

Prepared by the Health Care Financing Administration
Bureau of Data Management and Strategy
June, 1983

INTRODUCTION

This summary presents an overview of the information contained in the annual reports of the trustees required under Title XVIII of the Social Security Act - Health Insurance for the Aged and Disabled, commonly known as Medicare. There are two basic programs under Medicare:

(1) Hospital Insurance (HI) which pays for inpatient hospital care and other related care of those aged 65 and over and of the long-term disabled, and

(2) Supplementary Medical Insurance (SMI) which pays for physicians' services, outpatient hospital services and other medical expenses of those aged 65 and over and of the long-term disabled.

The HI program is financed primarily by payroll taxes, with the taxes paid by current workers used to pay benefits to current beneficiaries. However, the HI program maintains a trust fund that provides a small reserve against fluctuations. This type of financing is generally known as pay-as-you-go financing. By contrast, the SMI program is financed on an accrual basis with a contingency margin. This means that the SMI trust fund should always be somewhat greater than the claims that have been incurred by enrollees but not yet paid by the program. The trust funds hold all of the income not currently needed to pay benefits and related expenses. The assets of the funds may not be used for any other purpose; however, they may be invested in certain interest-bearing obligations of the U.S. Government.

The Secretaries of Treasury, Labor, and Health and Human Services serve as trustees of the HI and SMI trust funds. The Secretary of Treasury is the managing trustee. The Administrator of the Health Care Financing Administration, the agency charged with administering the Medicare program, is the Secretary of the Board of Trustees.

Copies of the complete 1983 HI and SMI annual reports can be obtained from the Health Care Financing Administration, Office of Public Affairs, Room 658 East High Rise, 6325 Security Boulevard, Baltimore, Maryland, 21235.

HOSPITAL INSURANCE TRUST FUND

As mentioned in the introduction, the HI trust fund is financed primarily by payroll taxes. The HI contribution rates applicable to taxable earnings in each of the calendar years 1981 and later are shown in Table 1. The maximum taxable amounts of annual earnings are shown for 1981 through 1983. After 1983, the automatic increase provisions in section 230 of the Social Security Act determine the maximum taxable amount.

TABLE 1.--CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar year	Maximum taxable amount of annual earnings	Contribution rate (Percent of taxable earnings) Employees and employers, each	Self-Employed
1981	$29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
Changes scheduled in present law:			
1984	Subject to	1.30	2.60
1985	automatic	1.35	2.70
1986 & later	increase	1.45	2.90

The Social Security Act was amended during 1982 by the Tax Equity and Fiscal Responsibility Act (TEFRA) and during 1983 by the Social Security Admendments of 1983 (Public Law 98-21). The major provisions among the many affecting the HI program were:

(1) TEFRA changed the method by which Medicare reimburses hospitals by replacing the previous per diem limits on routine inpatient

costs by limits on total inpatient costs per admission and limits on increases in total inpatient costs per admission. These limits are effective for cost reporting periods beginning on or after October 1, 1982. The limits on increases in total inpatient costs per admission expire for cost reporting periods beginning on or after October 1, 1985.

(2) Medicare coverage is extended to Federal employees, who are required to pay the hospital insurance portion of the FICA tax as of January 1, 1983.

(3) Medicare will temporarily cover hospice care for beneficiaries having a life expectancy of six months or less. This provision is effective November 1, 1983, and expires October 1, 1986.

(4) Public Law 98-21 changes the method by which Medicare makes payments to hospitals. Hospitals will no longer be reimbursed on a reasonable cost basis for their inpatient operating costs. Hospitals will be paid a prospectively determined price per discharge using diagnosis related groups. This provision is effective for hospital fiscal years beginning on or after October 1, 1983.

(5) Social Security coverage is mandated for employees of non-profit organizations. Terminations of coverage are not permitted as of March 31, 1983. Also, no terminations of coverage by State and local governments or entities will be permitted after April 20, 1983. Such entities now outside the system will be permitted to rejoin. This provision is effective upon enactment.

(6) Interfund borrowing among the OASI, DI and HI trust funds (authorized in 1981) is extended through 1987 with repayment to be made during 1988-1989 in 24 equal monthly payments. Beginning June 1983, loans would be repayable when the fund ratio of the borrowing fund exceeds 15 percent.

Operations of the HI Program

At the end of 1982, 26 million people over age 65 and 3 million disabled people under age 65 were covered under HI, financed primarily by the contributions of 116 million workers through payroll taxes. Payroll taxes during 1982 amounted to $34.6 billion, accounting for 90.9% of all HI income. About 2.7% of all income resulted from reimbursements from the general fund of the Treasury for military service credit and benefits for certain uninsured persons. Interest payments to the HI fund amounted to 5.4% of all HI income for 1982. The remaining 1.0% was contributed through premiums paid by voluntary enrollees and taxes collected from railroad workers. Of the $36.1 billion in HI disbursements, $35.6 billion was for benefit payments while the remaining $0.5 billion was spent for administrative expenses. HI administrative expenses were 1.4% of total disbursements.

Table 2 displays the HI fund operations for calendar years 1970-1982. In most years, the HI fund has increased. However, the fund ratio (the fund at the beginning of the year divided by disbursements during the year) has declined every year from its peak of 79 percent in 1975 to

45 percent in 1981. The fund ratio increased slightly at the beginning of 1982 primarily due to the increase in the contribution rate in 1981.

TABLE 2.--HI FUND OPERATIONS
CALENDAR YEARS 1970-1982
(Amounts in Billions)

Calendar year	Total income	Total disbursements	Interfund Borrowing Transfers	Net increase in fund	Fund at end of year	Ratio at beginning of year
1970	$ 6.0	$ 5.3		$ 0.7	$ 3.2	47%
1971	5.7	5.9		-0.2	3.0	54
1972	6.4	6.5		-0.1	2.9	47
1973	10.8	7.3		3.5	6.5	40
1974	12.0	9.4		2.7	9.1	69
1975	13.0	11.6		1.4	10.5	79
1976	13.8	13.7		0.1	10.6	77
1977	15.9	16.0		-0.2	10.4	66
1978	19.2	18.2		1.0	11.5	57
1979	22.8	21.1		1.8	13.2	54
1980	26.1	25.6		0.5	13.7	52
1981	35.7	30.7		5.0	18.7	45
1982	38.0	36.1	$-12.4	-10.5	8.2	52

NOTE: Components may not add to totals due to rounding.

Actuarial Status of the Trust Fund

The Board of Trustees has adopted the general financing principle that annual income to the hospital insurance program should be approximately equal to annual outlays of the program plus an amount to maintain a balance in the trust fund equal to one-half year's disbursements. Due to the $12.4 billion loan to the OASI fund at the end of 1982, the trust fund was far below this desired level. Projections were made under four alternative sets of assumptions: optimistic, two intermediate sets (alternatives

II-A and II-B), and pessimistic. Under both sets of intermediate assumptions, the trust fund ratio is projected to remain around 20 to 30 percent in most years until the late 1980's and then decline rapidly with complete exhaustion of the fund around 1990.

Under the more optimistic set of assumptions (alternative I), the trust fund is projected to grow until about 1988, then to decline steadily until the fund is completely exhausted in 1996. Under the more pessimistic set of assumptions (alternative III), the trust fund is projected to decrease steadily with complete exhaustion of the fund by 1988.

Table 3 summarizes the estimated operations of the HI trust fund under the four alternative sets of assumptions. Figure 1 shows historic trust fund ratios for recent years and projected ratios under the four sets of assumptions.

The adequacy of the financing of the HI program on a long-range basis is measured by comparing on a year-by-year basis the actual tax rates specified by law with the corresponding total costs of the program, expressed as percentages of taxable payroll. The actuarial balance is defined to be the excess of the average tax for the 25-year valuation period (1983-2007) over the average cost of the program expressed as a percent of taxable payroll. The average tax rate for the 25-year period

TABLE 3.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1982-96, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Interfund borrowing transfers 1/	Net increase in fund	Fund at end of year	Ratio of assets to disbursements 2/ (percent)
ALTERNATIVE I (Optimistic)						
1982 3/	$38.0	$ 36.1	$-12.4	$-10.6	$ 8.2	52%
1983	44.8	41.2		3.6	11.8	20
1984	46.0	46.2	1.0	0.9	12.6	26
1985	52.0	51.1	1.6	2.5	15.2	25
1986	59.1	55.7	9.1	12.5	27.6	27
1987	63.6	60.5	0.7	3.8	31.4	46
1988	68.0	65.9		2.1	33.5	48
1989	71.9	70.8		1.1	34.6	47
1990	76.8	77.1		-0.4	34.2	45
1991	80.8	82.4		-1.6	32.6	42
1992	86.1	89.1		-3.1	29.5	37
1993	90.1	95.8		-5.7	23.9	31
1994	95.3	102.8		-7.6	16.3	23
1995	99.4	110.2		-10.8	5.5	15
1996	104.5	117.6		-13.2	4/	5
ALTERNATIVE II-A (Intermediate)						
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.6	11.7	20
1984	45.8	46.5	0.6	-0.1	11.6	25
1985	51.3	51.8		-0.5	11.2	22
1986	58.2	57.1	4.8	5.9	17.1	20
1987	61.9	62.6	6.8	6.1	23.2	27
1988	65.7	68.9	0.2	-3.0	20.3	34
ALTERNATIVE II-B (Intermediate)						
1982 3/	38.8	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.5	11.7	20
1984	45.6	46.6	0.5	-0.5	11.2	25
1985	51.3	52.3		-1.0	10.2	21
1986	58.4	58.0	1.1	1.5	11.8	18
1987	62.5	64.1	2.4	0.8	12.6	18
1988	66.0	71.0	8.4	3.5	16.1	18
1989	70.0	78.4		-8.4	7.8	21
1990	73.9	86.6		-12.6	6/	9
ALTERNATIVE III (Pessimistic)						
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.4	41.2		3.2	11.4	20
1984	44.5	46.8		-2.3	9.1	24
1985	50.5	54.1		-3.6	5.5	17
1986	58.2	61.9		-3.7	1.8	9
1987	62.6	70.5	12.4	4.5	6.3	3
1988	66.5	80.4		-13.9	7/	8

1/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted from the HI fund balance. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

2/ Ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

3/ Figures for 1982 represent actual experience.

4/ Trust fund depleted in calendar year 1996.

5/ Trust fund depleted in calendar year 1991.

6/ Trust fund depleted in calendar year 1990.

7/ Trust fund depleted in calendar year 1988.

NOTE: Totals do not necessarily equal the sum of rounded components.

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TABLE 3.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND
DURING CALENDAR YEARS 1982-96, UNDER ALTERNATIVE SETS OF ASSUMPTIONS
(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Interfund borrowing transfers 1/	Net increase in fund	Fund at end of year	Ratio of assets to disbursements 2/ (percent)
			ALTERNATIVE I (Optimistic)			
1982 3/	$38.0	$ 36.1	$-12.4	$-10.6	$ 8.2	52%
1983	44.8	41.2		3.6	11.8	20
1984	46.0	46.2	1.0	0.9	12.6	26
1985	52.0	51.1	1.6	2.5	15.2	25
1986	59.1	55.7	9.1	12.5	27.6	27
1987	63.6	60.5	0.7	3.8	31.4	46
1988	68.0	65.9		2.1	33.5	48
1989	71.9	70.8		1.1	34.6	47
1990	76.8	77.1		-0.4	34.2	45
1991	80.8	82.4		-1.6	32.6	42
1992	86.1	89.1		-3.1	29.5	37
1993	90.1	95.8		-5.7	23.9	31
1994	95.3	102.8		-7.6	16.3	23
1995	99.4	110.2		-10.8	5.5	15
1996	104.5	117.6		-13.2	4/	5
			ALTERNATIVE II-A (Intermediate)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.6	11.7	20
1984	45.8	46.5	0.6	-0.1	11.6	25
1985	51.3	51.8		-0.5	11.2	22
1986	58.2	57.1	4.8	5.9	17.1	20
1987	61.9	62.6	6.8	6.1	23.2	27
1988	65.7	68.9	0.2	-3.0	20.3	34
1989	69.8	75.8		-6.0	14.3	27
1990	73.9	83.5		-9.6	4.7	17
1991	77.5	91.5		-14.0	5/	5
			ALTERNATIVE II-B (Intermediate)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.5	11.7	20
1984	45.6	46.6	0.5	-0.5	11.2	25
1985	51.3	52.3		-1.0	10.2	21
1986	58.4	58.0	1.1	1.5	11.8	18
1987	62.5	64.1	2.4	0.8	12.6	18
1988	66.0	71.0	8.4	3.5	16.1	18
1989	70.0	78.4		-8.4	7.8	21
1990	73.9	86.6		-12.6	6/	9
			ALTERNATIVE III (Pessimistic)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.4	41.2		3.2	11.4	20
1984	44.5	46.8		-2.3	9.1	24
1985	50.5	54.1		-3.6	5.5	17
1986	58.2	61.9		-3.7	1.8	9
1987	62.6	70.5	12.4	4.5	6.3	3
1988	66.5	80.4		-13.9	7/	8

1/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted from the HI fund balance. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

2/ Ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

3/ Figures for 1982 represent actual experience.

4/ Trust fund depleted in calendar year 1996.

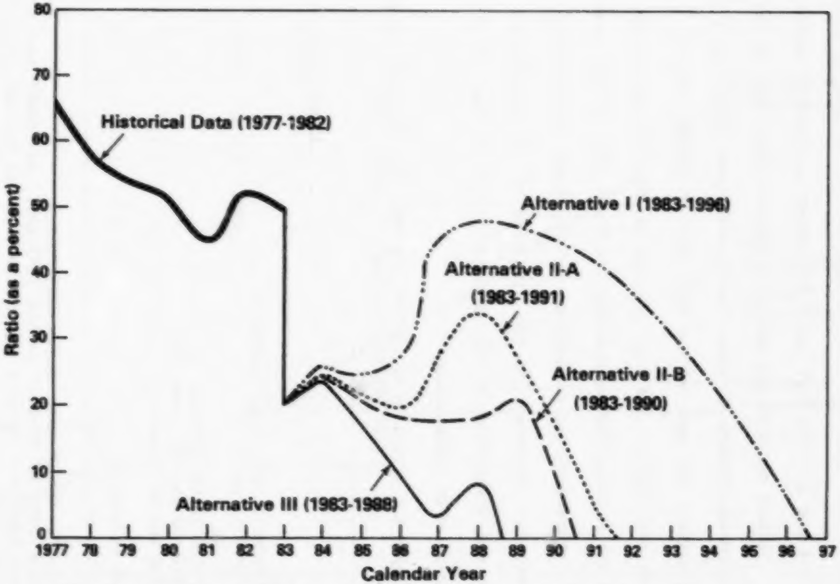
5/ Trust fund depleted in calendar year 1991.

6/ Trust fund depleted in calendar year 1990.

7/ Trust fund depleted in calendar year 1988.

NOTE: Totals do not necessarily equal the sum of rounded components.

Figure 1
Short Term HI Trust Fund Ratios



Note: The trust fund ratio is defined as the ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

1983-2007 is 2.87 percent. The average cost of the program under alternatives II-A and II-B is 3.97 and 4.11 percent of taxable payroll, respectively. Table 4 compares the actuarial balance under each of the four sets of assumptions. Figure 2 shows the year-by-year costs as a percent of taxable payroll for each of the four sets of assumptions, as well as the scheduled tax rates. The cost figures in Table 4 and Figure 2 include amounts for building and maintaining the trust fund at the level of a half year's disbursements as recommended by the Board of Trustees. Figure 2 emphasizes the inadequacy of the financing of the HI program by illustrating the divergence of the program costs and scheduled tax rates under each set of assumptions.

TABLE 4.--ACTUARIAL BALANCE OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

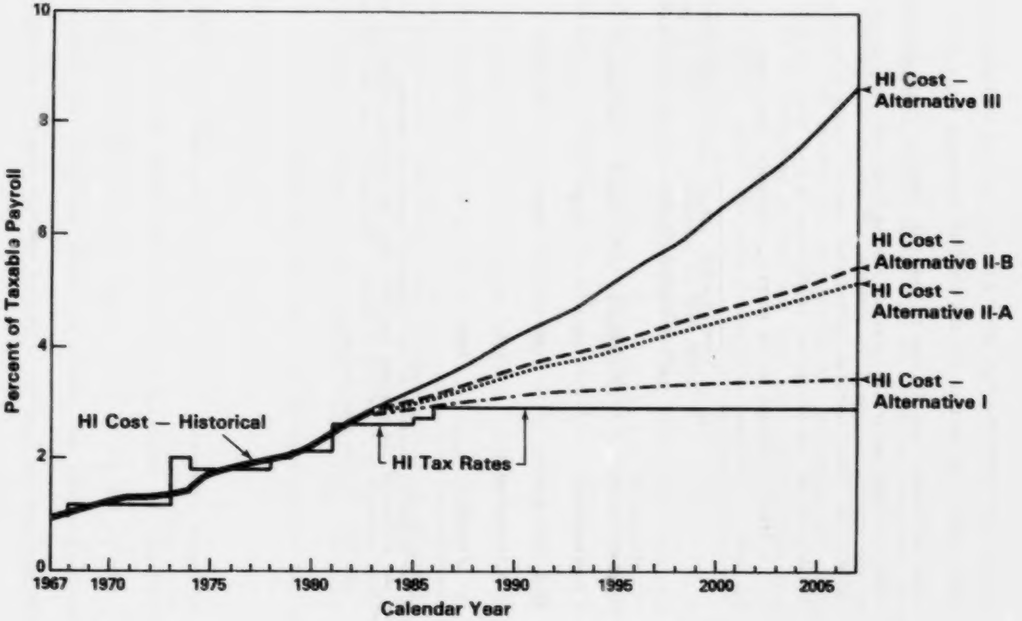
	Alternative			
	I	II-A	II-B	III
Average contribution rate, scheduled under present law 1/	2.87%	2.87%	2.87%	2.87%
Average cost of the program, for expenditures and for trust fund building and maintenance 2/	3.21	3.97	4.11	5.38
Actuarial balance 3/	-0.34	-1.10	-1.24	-2.51

1/ Average for the 25-year period 1983-2007.

2/ Average for the 25-year period 1983-2007, expressed as a percent of taxable payroll. Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

3/ The actuarial balance of the hospital insurance program is defined to be the excess of the average tax rate for the 25-year valuation period over the average cost of the program, expressed as a percent of taxable payroll, for the same period.

Figure 2
Estimated HI Cost and Tax Rates



It is noteworthy that under all four sets of assumptions used in the 1983 report, the outlook for the hospital insurance trust fund is slightly more optimistic than it was in the 1982 report. This is primarily the result of the major legislation during 1982 and 1983 which will help curtail the rapid increase in hospital costs. Table 5 below presents a comparison of the projected experience in the 1982 and 1983 reports.

TABLE 5.--STATUS OF THE HOSPITAL INSURANCE TRUST FUND

	Year in which the trust fund is exhausted as published in the		Actuarial Balance of the HI program 1/ as published in the	
Alternative Assumptions	1982 Report	1983 Report	1982 Report	1983 Report
I (Optimistic)	1991	1996	-0.86	-0.34
II-A (Intermediate)	1989	1991	-1.63	-1.10
II-B (Intermediate)	1987	1990	-2.07	-1.24
III (Pessimistic)	1986	1988	-3.73	-2.51

1/The actuarial balance of the hospital insurance program is defined to be the excess of the average tax rate for the 25-year valuation period over the average cost of the program, expressed as a percent of taxable payroll, for the same period.

Conclusion

The present financing schedule for the hospital insurance program is barely adequate to ensure the payment of benefits through the end of this decade if the assumptions underlying the estimates are realized. The trust fund is exhausted in 1991 and 1990 under alternatives II-A and II-B, respectively. Under the more pessimistic assumptions, the fund is exhausted in 1988. Even under the more optimistic alternative I, the present financing schedule will result in the fund being exhausted in 1996. In order to bring the hospital insurance program into close actuarial balance, either disbursements of the program will have to be reduced by 30 percent or financing will have to be increased by 43 percent. Despite the short-term uncertainties, the enactment of TEFRA in 1982 and Public Law 98-21 in 1983 has substantially reduced the long range deficit of the HI fund. More importantly, the prospective payments provisions of Public Law 98-21 have made the outlays of the HI program potentially less vulnerable to excessive rates of growth in the hospital industry by providing the Secretary of Health and Human Services with some discretion over the level of payments to hospitals.

The quadrennial Advisory Council on Social Security, appointed by the Secretary, will be addressing the financial status of the hospital insurance trust fund. The council's report is due by the end of 1983. The Board recommends that Congress study carefully the advisory council's recommendations as it takes further action to curtail the rapid growth in the cost of the hospital insurance program which has occurred in recent years and which is anticipated in the future.

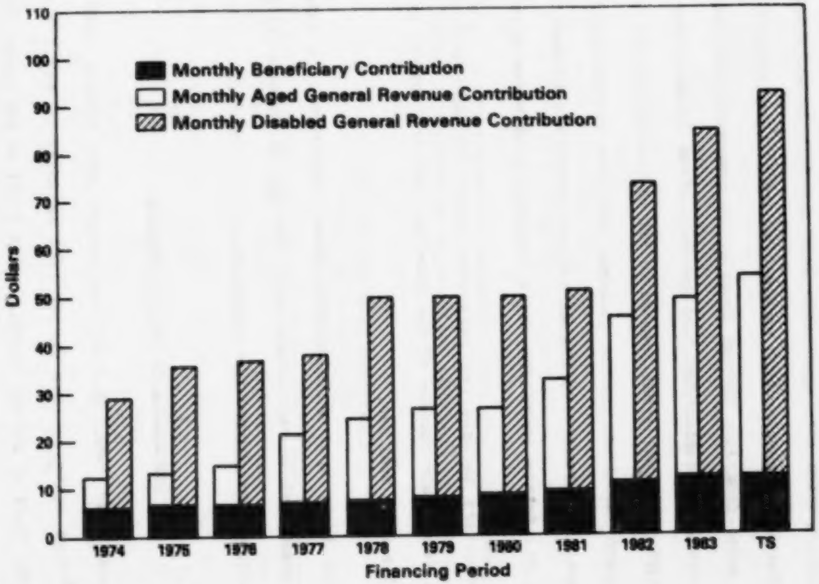
SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Financing for the supplementary medical insurance program is established annually on the basis of standard monthly premium rates (paid by or on behalf of all participants) and monthly actuarial rates determined separately for aged and disabled beneficiaries (on which general revenue contributions are based). Prior to the 6-month transition period (July 1, 1983 through December 31, 1983) these rates were applicable to the 12-month periods ending June 30. Beginning January 1, 1984, the annual basis will change to the 12-month periods ending December 31. Monthly actuarial rates are equal to one-half the monthly amounts necessary to finance the SMI program. These rates determine the amount to be contributed from general revenues on behalf of each enrollee. Based on the formula in the law, the government contribution effectively makes up the difference between twice the monthly actuarial rates and the standard monthly premium rate. Figure 3 presents these values for financing periods since 1974. The extent to which general revenue financing is becoming the major source of income for the program is clearly indicated in this figure.

Standard monthly premium rates and monthly actuarial rates have been announced for periods through December 31, 1983. For the 6-month period ending December 31, 1983 (transitional semester (TS)), the standard monthly premium rate is $12.20, and the monthly actuarial rates are $27.00 and $46.10 for the aged and disabled, respectively.

The Social Security Act was amended during 1982 and 1983. The major provisions among the many affecting the SMI program were:

Figure 3
SMI Monthly Per Capita Income



Financing Period:
For periods 1983 and earlier, the financing period is July 1 through June 30.
For the transitional semester (TS), the financing period is July 1, 1983 through December 31, 1983.

(1) The premium rate applicable July 1, 1983 through December 31, 1983 is frozen at the rate which applied June 1983. Some general revenues shall be added from July through December to compensate for keeping the smaller June 1983 premium for that period. From January 1984 through December 1985, the monthly SMI premium is set at one-half of the actuarial rate for aged enrollees. After December 1985 the determination of the premium rate will revert to the method used before enactment of this provision and future increases shall apply on a calendar year basis.

(2) Medicare becomes the secondary payor for employees aged 65 through 69 (and their spouses of the same age) who are covered by health plan benefits of an employer.

(3) The basis upon which provider-based physicians are reimbursed are to be prescribed in regulations which distinguish between (a) professional component, and (b) provider component.

Operations of the SMI Program

In fiscal year 1982, 28.2 million people were covered under SMI. General revenue contributions during 1982 amounted to $13.3 billion, accounting for 75.6% of all SMI income. About 21.7% of all income resulted from the premiums paid by the participants, with interest payments to the SMI fund accounting for the remaining 2.7%. Of the $15.6 billion in SMI disbursements, $14.8 billion was for benefit payments while the remaining $0.8 billion was spent for administrative expenses. SMI administrative expenses were 4.8% of total disbursements. The historical operations of the SMI trust fund since fiscal year 1977, as well as the projected operations of the fund for fiscal years through 1985, for both alternative II-A and alternative II-B are shown in table 6. As can be seen, income has exceeded disbursements for most of the historical years and the trust fund balance is projected to continue to increase through fiscal year 1985. However, as the report notes, the financial status of the program depends on both the total net assets and liabilities. It is, therefore, necessary to examine the incurred experience of the program since it is this experience which is used to determine the actuarial rates discussed above and which forms the basis of the concept of actuarial soundness as it relates to the SMI program.

TABLE 6.--SMI FUND OPERATIONS
FISCAL YEARS 1977-1985
(In Billions)

Fiscal Year	Total income	Total disbursements	Net increase in fund	Fund at end of year
1977	$ 7.4	$ 6.3	$ 1.0	$2.3
1978	9.0	7.4	1.7	4.0
1979	9.8	8.8	1.0	5.0
1980	10.3	10.7	-0.5	4.5
1981	12.4	13.2	-0.8	3.7
1982	17.6	15.6	2.1	5.8
Alternative II-A:				
1983	19.1	18.3	0.7	6.5
1984	22.4	21.3	1.1	7.6
1985	25.3	24.5	0.8	8.5
Alternative II-B:				
1983	19.1	18.3	0.7	6.5
1984	22.4	21.3	1.1	7.6
1985	25.5	24.6	0.9	8.5

Note: Components may not add to totals due to rounding.

Actuarial Soundness of the SMI Program

The concept of actuarial soundness, as it applies to the supplementary medical insurance program, is closely related to the concept as it applies to private group insurance. The supplementary medical insurance program is essentially yearly renewable term insurance intended to be self-supporting from premium income paid by the enrollees and from income contributed from general revenue in proportion to premium payments.

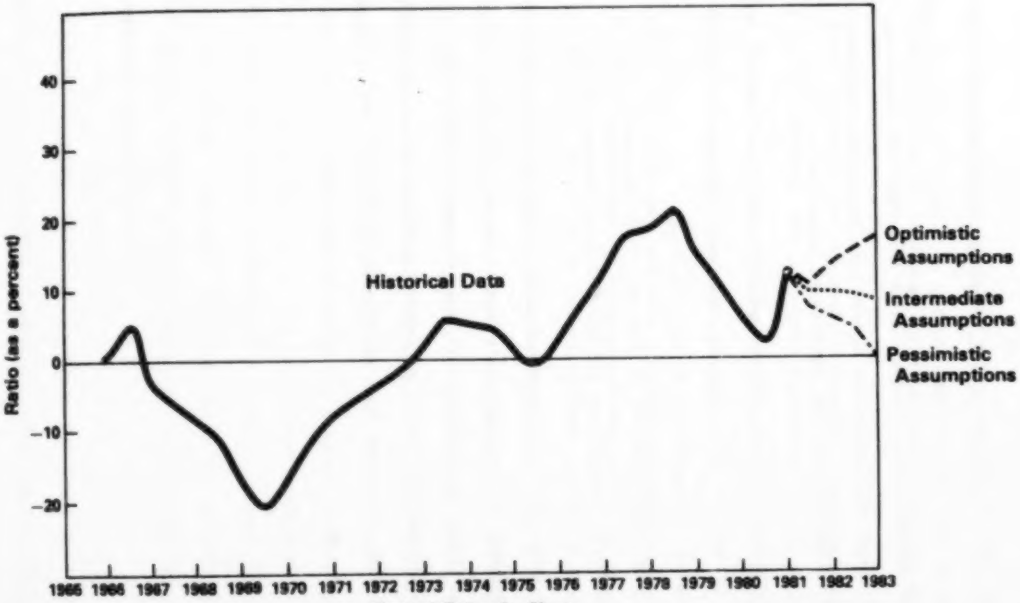
In testing the actuarial soundness of the supplementary insurance program, it is not appropriate to look beyond the period for which the enrollee premium rate and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that (1) income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities which will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to cover the impact of a moderate degree of projection error.

The initial tests for actuarial soundness and trust fund adequacy can be viewed by direct examination of absolute dollar levels. In providing an appropriate contingency or margin for error, however, there must be some relative measure. The relative measure or ratio used for this purpose is the ratio of net surplus or deficit to the following year's incurred expenditures. Figure 4 shows this ratio for historical years and for projected years under the intermediate assumptions (alternative II-B), as well as high and low cost sensitivity scenarios.

Financing for the 12-month period ending June 30, 1983 was established to maintain assets at the same level relative to program expenditures which existed prior to June 30, 1982. The resulting excess of assets over liabilities as of June 30, 1983 represents 9.4% of the projected incurred expenditures for the following 12-month period.

The actuarial rates for the 6-month period ending December 31, 1983, as implemented, will reduce this excess to a more appropriate level. Under more pessimistic assumptions as to cost increases, assets based on financing already established will be insufficient to cover outstanding liabilities. However, the trust fund would remain positive allowing claims to be paid.

Figure 4
Actuarial Status of the SMI Trust Fund



Note: The actuarial status of the SMI trust fund is measured by the ratio of the end of year surplus or deficit to the following year's incurred expenditures.

Conclusion

The financing established through December 1983 is sufficient to cover projected benefit and administrative costs incurred through that time period and to build a level of trust fund assets which is adequate to cover the impact of a moderate degree of projection error. Thus, the SMI program can be said to be actuarially sound.

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98th Congress, 1st Session - - - - - - - House Document No. 98-77

AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY, THE FINAL PROTOCOL TO THE AGREEMENT, AND THE ADMINISTRATIVE AGREEMENT FOR THE IMPLEMENTATION OF THE AGREEMENT AND ADDITIONAL PROTOCOL, PURSUANT TO 42 U.S.C. 433(e)(1)

JUNE 28, 1983.—Message and accompanying papers referred to the Committee on Ways and Means and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE
52-030 O WASHINGTON : 1983

To the Congress of the United States:

Pursuant to section 233(e)(1) of the Social Security Act as amended by the Social Security Amendments of 1977 (P.L. 95-216, 42 U.S.C. 433(e)(1)), I transmit herewith the Agreement between the United States of America and Belgium on Social Security and the Final Protocol to the Agreement, both signed on February 19, 1982, and the Administrative Agreement for the Implementation of the Agreement and Additional Protocol, both signed on November 23, 1982.

These United States-Belgium agreements are similar in objective to the social security agreements already in force with Italy, the Federal Republic of Germany, and Switzerland. Such bilateral agreements, which are generally known as totalization agreements, provide for limited coordination between the United States and foreign social security systems to overcome the problems of gaps in protection and of dual coverage and taxation for workers who move from one country to the other.

I also transmit for the information of the Congress a comprehensive report prepared by the Department of Health and Human Services, which explains the provisions of the Agreements and provides data on the number of persons affected by the Agreements and the effect on social security financing as required by the same provision of the Social Security Act.

The Department of State and the Department of Health and Human Services join with me in commending the United States-Belgium Social Security Agreement and related documents.

RONALD REAGAN.

THE WHITE HOUSE, *June 28, 1983.*

ATTACHMENT 1

AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY

The United States of America

and

The Kingdom of Belgium

BEING DESIROUS of regulating the relationship between their two countries in the field of Social Security, have agreed to conclude an Agreement for that purpose, as follows:

PART I

Definitions and Laws

ARTICLE I

For the purposes of this Agreement:

1. "Territory" means,

as regards the United States, the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam and American Samoa, and

as regards Belgium, the territory of the Kingdom of Belgium;

2. "National" means,

as regards the United States, a national of the United States as defined in Section 101, Immigration and Nationality Act of 1952, as amended, and

as regards Belgium, a person of Belgian nationality;

3. "Laws" means

the laws and regulations specified in Article 2;

4. "Worker" means

an employed person (un "travailleur salarie") or a person deemed equivalent to an employed person, as well as a self-employed person, as established by the respective laws;

5. "Competent Authority" means,

as regards the United States, the Secretary of Health and Human Services, and

as regards Belgium, the Minister for Social Affairs, the Minister for the Middle Classes with regard to obligations imposed by virtue of the social security system for self-employed persons and the Secretary of State for Pensions with regard to old age and survivors benefits (pensions) of the system for employed and self-employed persons;

6. "Agency" means,

as regards the United States, the Social Security Administration, and

as regards Belgium, any institution, agency or authority responsible for applying all or part of the laws designated in Article 2.1(b);

7. "Period of coverage" means

a period of payment of contributions or a period of earnings from employment or self-employment, as defined or recognized as a period of coverage by the laws under which such period was completed or any similar period insofar as it is recognized by such laws as equivalent to a period of coverage;

8. "Benefit" means

any cash benefit provided for in the laws of either Contracting State;

9. "Basic benefit amount" means,

as regards the United States, the primary insurance amount as provided under United States laws, and

as regards Belgium, the amount of the benefit which is payable on a worker's record under Belgian laws.

10. "Family member" means

any person defined or recognized as a family member or designated as a member of the household by the laws under which the benefits are paid;

11. "Survivor" means

any person eligible for benefits based on periods of coverage of a deceased person under the laws of each of the Contracting States;

12. "Stateless person" means

a person defined as a stateless person in Article 1 of the Convention relating to the Status of Stateless Persons dated September 28, 1954;

13. "Refugee" means

a person defined as a refugee in Article 1 of the Convention relating to the Status of Refugees dated July 28, 1951, and the Protocol to that Convention dated January 31, 1967.

ARTICLE II

1. For the purpose of this Agreement, the applicable laws are:

    a. As regards the United States, the laws governing the Federal old-age, survivors and disability insurance program:

        (i) Title II of the Social Security Act and regulations pertaining thereto, except sections 226, 226A and 228 of that title and regulations pertaining to those sections,

        (ii) Chapter 2 and Chapter 21 of the Internal Revenue Code of 1954 and regulations pertaining to those chapters;

b. As regards Belgium, the laws governing:

(i) old-age and survivors pensions insurance for employed and self-employed persons,

(ii) disability insurance for employed and self-employed persons, sailors of the merchant marine and miners,

and, with regard to Part III only, the laws governing:

(iii) social security for employed persons,

(iv) the social code for self-employed persons,

(v) sickness insurance for employed and self-employed persons,

(vi) unemployment insurance,

(vii) family allowances for employed and self-employed persons,

(viii) annual vacations for employed persons,

(ix) work accidents in the private sector,

(x) occupational disease in the private sector.

2. This Agreement shall also apply to the same extent to future laws amending or supplementing the laws specified in this Article.

3. Unless otherwise provided in this Agreement, laws within the meaning of paragraph one shall not include treaties or other international agreements concluded between one Contracting State and a third State or laws or regulations promulgated for their specific implementation.

PART II

General Provisions

ARTICLE III

Unless otherwise provided, this Agreement shall apply to:

(a) persons who are or have been subject to the laws of a Contracting State and who are: (i) nationals of a Contracting State, or (ii) stateless persons or refugees residing in the territory of one Contracting State, as well as (iii) family members and survivors of persons in (i) or (ii);

(b) family members and survivors of persons who have been subject to the laws of a Contracting State regardless of the latter persons' nationality if the family members or survivors are nationals of a Contracting State, or stateless persons or refugees who reside in the territory of one Contracting State.

ARTICLE IV

1. Unless otherwise provided in this Agreement, the persons designated in Article three who reside in the territory of either Contracting State shall, in the application of the laws of a Contracting State, receive equal treatment with the nationals of that State.

2. Unless otherwise provided in this Agreement, the laws of a Contracting State under which entitlement to or payment of cash benefits is dependent on residence or presence in the territory of that State shall not be applicable to the persons designated in Article 3 who reside in the territory of the other State.

3. Nationals of a Contracting State who reside outside the territories of both Contracting States shall receive benefits provided by the laws of the other Contracting State under the same conditions which the other State applies to its own nationals who reside outside the territories of both States.

PART III

Provisions on Coverage

ARTICLE V

1. Unless otherwise provided in this Part or the Final Protocol, a person employed or self-employed within the territory of one of the Contracting States shall be subject only to the laws of that State even if the person resides in the territory of the other State, or if the person's employer or the offices of the employer are located in the territory of the other Contracting State.

2. Unless otherwise provided in this Part, persons employed on a vessel which flies the flag of one of the Contracting States shall be subject only to the laws of that State, even if they reside in the territory of the other State. For the purpose of this Part, a vessel which flies the flag of the United States shall be defined as an "American vessel" under the laws of the United States.

3. A person who is self-employed in the territory of both Contracting States shall be subject to the laws of only the Contracting State of which he is resident. In determining the amount of earnings creditable and contributions payable under the laws of that Contracting State, self-employment income earned within the territory of both Contracting States shall be taken into account.

ARTICLE VI

The rules set forth in Article 5 shall be subject to the following exceptions:

1. A person who is normally employed in the territory of a Contracting State by his employer in that territory and who is sent by that employer to work for that employer in the territory of the other Contracting State, shall remain subject to the laws of only the first Contracting State, provided that the employment in the territory of the other Contracting State is not expected to last for more than 5 years.

2. A person who is normally employed or self-employed in the territory of one of the Contracting States and who pursues a self-employed activity in the territory of the other Contracting State, shall remain subject to the laws of the first Contracting State, provided that the duration of the work in the other Contracting State is not expected to last for more than 5 years.

3. Article 5.2 shall not apply in the case of a person who is employed in the territorial waters or in a port of a Contracting State on a vessel flying the flag of the other Contracting State, if the person is not ordinarily employed at sea. In such cases Article 5.1 or Article 6.1 shall apply as appropriate.

4. A worker who is employed in a public or private international air transport enterprise of one of the Contracting States as a member of the traveling personnel and who works in the territory of the other Contracting State on either a permanent or a temporary basis shall be subject to the laws of only the Contracting State where the enterprise is headquartered.

ARTICLE VII

1. This Agreement shall not affect the provisions of the Vienna Convention on Diplomatic Relations of April 18, 1961, or of the Vienna Convention on Consular Relations of April 24, 1963.

2. Notwithstanding Article 5, nationals of one of the Contracting States who are employed by that State in the territory of the other Contracting State but to whom the Conventions mentioned in paragraph 1 do not apply shall be subject to the laws of only the first Contracting State.

3. Persons employed by the United States Government in Belgium who are nationals or permanent residents of Belgium and who are not United States nationals shall be subject to Belgian laws unless they are covered under the civil service retirement system of the United States.

4. The persons referred to in paragraph 3 who are already covered by the civil service retirement system of the United States shall remain covered by that system and shall be exempt from the application of Belgian laws.

ARTICLE VIII

The Competent Authorities may agree to grant an exception to the provisions of Part III in the interest of particular workers or particular categories of workers, provided that any affected worker shall be subject to the laws of one of the Contracting States.

PART IV

Provisions on Benefits

Chapter I

General Provisions

ARTICLE IX

1. Where a person has completed periods of coverage under the laws of both Contracting States, the agency of a Contracting State which determines entitlement to benefits under its laws shall take account of periods of coverage which are creditable under the laws of the other Contracting State and which do not coincide with periods of coverage credited under its own laws.

2. An agency of a Contracting State shall not apply the provisions of Article 9.1 if the person on whose account benefits are based has sufficient periods of coverage to satisfy the requirements for entitlement to benefits under the laws of that Contracting State.

3. Entitlement to a benefit from a Contracting State which results from Article 9.1 shall terminate with the acquisition of sufficient periods of coverage under the laws of that Contracting State to establish entitlement to a higher benefit without the need to invoke the provisions of this Article.

4. This Agreement shall not prevent the application of provisions of the laws of either Contracting State concerning the payment of benefits that are more favorable to the persons listed in Article 3.

5. The laws of one Contracting State which provide for reduction, suspension or termination of benefits to take account of other social security benefits or other income may be applied to beneficiaries even if benefits are being paid by virtue of the laws of the other Contracting State or if the individual receives income in the territory of the other Contracting State. However, old-age, survivors, or disability benefits (pensions) shall not be reduced by benefits of the same type if they are paid by both Contracting States in conformity with the provisions of Article 10. For the application of this paragraph, old-age and survivors benefits granted under United States laws shall be treated as benefits under Article 10.

ARTICLE X

1. Where entitlement to a benefit under the laws of a Contracting State is established according to the provisions of Article 9.1, the agency of that Contracting State shall compute a theoretical basic benefit amount by considering (a) all the periods of coverage completed under its own laws and (b) all the periods of coverage completed under the laws of the other Contracting State which do not coincide with periods of coverage completed under its own laws.

2. The agency referred to in paragraph 1 shall then establish a pro rata basic benefit amount on the basis of the theoretical basic benefit amount by applying the ratio of the periods of coverage in clause (a) of paragraph 1 to the total of all periods of coverage in clauses (a) and (b) of paragraph 1.

3. Where a pro rata basic benefit amount has been computed, all benefits payable by the agency referred to in paragraph 1 on the basis of a worker's record shall be paid on the basis of that pro rata basic benefit amount.

Chapter II

Provisions Applicable to the United States

ARTICLE XI

1. The agency of the United States shall not apply the provisions of Chapter I in the case of a worker who has less than 6 quarters of coverage under United States laws.

2. In determining eligibility for benefits under Article 9, the agency of the United States shall credit 1 quarter of coverage for every 3 months of coverage certified as creditable by the agency of Belgium; however, no quarter of coverage shall be credited for any calendar quarter already credited as a quarter of coverage under United States laws. The total number of quarters of coverage to be credited for a year shall not exceed 4.

3. For any calendar quarter credited with a quarter of coverage based on Belgian periods of coverage, the agency of the United States shall take into account for purposes of computing a theoretical basic benefit amount under Article 10 the amount of any earnings credited to the person in that period under Belgian laws, subject to the maximum annual creditable earnings limitation under United States laws.

Chapter III

Provisions Applicable to Belgium

ARTICLE XII

1. The agency of Belgium shall not be obliged to apply the provisions of Chapter I in the case of a worker who has less than 18 months of coverage under Belgian laws. In the case of disability insurance, the agency of Belgium shall not apply the provisions of Chapter I unless the worker has completed 18 months of coverage under Belgian laws before the beginning of the period of incapacity for work leading to a disability.

2. In determining eligibility for benefits under Article 9, the agency of Belgium shall credit 3 months of coverage for each quarter of coverage certified as creditable by the United States agency to the extent the months do not coincide with months of coverage already credited as periods of coverage under Belgian laws.

3. For periods of coverage which were completed under the laws of the United States, the Belgian agency shall credit the average of the earnings credited under Belgian laws.

4. Where under Belgian laws the basic benefit amount is determined without regard to the duration of the periods of coverage, that amount shall be considered the theoretical basic benefit amount for purposes of Article 10.1.

5. Where periods of coverage resulting from employment or self-employment overlap with assimilated periods, only the former shall be counted in the application of Article 10.1.

6. Where Belgian laws establish as a condition for receiving certain benefits that the periods of coverage be completed in a given profession or occupation which is subject to a special pension system, in determining eligibility for such benefits only the periods completed under United States laws in the same profession or occupation shall be totalized with periods of coverage under such special system. If the total of such periods of coverage does not result in entitlement under the special system, or if totalization of such periods does not result in payment of the highest possible benefit amount, such periods shall be used to determine eligibility for benefits of the general pension system applicable under Belgian laws to employed persons.

PART V

Miscellaneous Provisions

ARTICLE XIII

The Competent Authorities of the two Contracting States shall:

(a) Make all necessary administrative arrangements for the application of this Agreement and designate liaison agencies;

(b) Define the procedures for reciprocal administrative assistance, including the allocation of expenses associated with obtaining medical, administrative, and other evidence required for the application of this Agreement;

(c) Directly communicate to each other information concerning the measures taken for the application of this Agreement; and

(d) Directly communicate to each other, as soon as possible, information concerning all changes in their respective laws which may affect the application of this Agreement.

ARTICLE XIV

The Competent Authorities and the agencies of the Contracting States, within the scope of their respective authority, shall assist each other in implementing this Agreement. This assistance shall be free of charge, subject to exceptions to be agreed upon in an administrative agreement.

ARTICLE XV

Where the laws of a Contracting State provide that any document which is submitted to a Competent Authority or an agency of that Contracting State shall be exempted, wholly or partly, from fees or charges, including consular and administrative fees, the exemption shall also apply to documents which are submitted to a Competent Authority or an agency of the other Contracting State in accordance with its laws.

ARTICLE XVI

1. The Competent Authorities and agencies of the Contracting States may correspond directly with each other and with any person wherever the person may reside whenever it is necessary for the administration of this Agreement. The correspondence may be in an official language of either Contracting State.

2. An application or document may not be rejected because it is in the official language of the other Contracting State.

3. Documents and certificates which are presented for purposes of this Agreement shall be exempted from requirements for authentication by diplomatic or consular authorities.

ARTICLE XVII

1. A written application for benefits filed with an agency of one Contracting State shall protect the rights of the claimants under the laws of the other Contracting State if the applicant (a) requests that it be considered an application under the laws of the other Contracting State or (b) in the absence of a request that it be so considered, it appears in the determination of a claim based on that application that the person on whose record benefits are claimed has completed periods of coverage under the laws of the other Contracting State.

2. An applicant may request that an application for old-age or survivors benefits filed with an agency of one Contracting State not be considered an application under the laws of the other Contracting State or that the application be effective on a different date in the other Contracting State within the limitations of and in conformity with the laws of the other Contracting State.

3. If, according to Belgian laws, the eligibility to certain benefits is determined without an application, the date the eligibility is established under Belgian laws shall, within the limits provided in United States laws, be considered as the basis for a claim for any corresponding benefit under United States law.

4. The provisions of this Agreement shall apply only to an application for benefits which is filed on or after the date this Agreement enters into force.

ARTICLE XVIII

An application, appeal or other document which according to the laws of a Contracting State must be submitted to an agency of that Contracting State within a specified period shall be considered to have been timely filed if it is submitted within the same period to an agency of the other Contracting State. In such case, the agency with which the application, appeal or document has been filed shall indicate the date of receipt on the document and transmit it without delay to the liaison agency of the other Contracting State.

ARTICLE XIX

1. Payments under this Agreement may be made in the currency of the Contracting State making the payment.

2. In case provisions designed to restrict the exchange or exportation of currencies are introduced by either Contracting State, the Governments of both Contracting States shall immediately decide on the measures necessary to insure the transfer of sums owed by either Contracting State under this Agreement.

ARTICLE XX

1. Disagreements between the two Contracting States regarding the interpretation or implementation of this Agreement shall, as far as possible, be settled by the Competent Authorities.

2. If a disagreement cannot be resolved pursuant to paragraph 1 by the Competent Authorities, it shall, at the request of either Contracting State, be submitted for binding arbitration in accordance with procedures to be agreed upon by the Contracting States.

PART VI

Transitional and Final Provisions

ARTICLE XXI

1. This Agreement shall not establish any claim to payment of a benefit for any period before its entry into force or a lump-sum death benefit if the person died before its entry into force.

2. Consideration shall be given to periods of coverage under the laws of either Contracting State occurring before the entry into force of this Agreement, in order to determine the right to benefits under this Agreement; except that neither State shall take into account periods of coverage occurring prior to the earliest date for which periods of coverage may be credited under its laws.

3. Subject to the provisions of paragraph 1, this Agreement shall also apply to events relevant to rights under the laws which occurred prior to its entry into force.

4. This Agreement shall not result in the reduction of cash benefit amounts because of its entry into force.

ARTICLE XXII

The attached Final Protocol shall form an integral part of this Agreement.

ARTICLE XXIII

1. This Agreement shall remain in force and effect until the expiration of 1 calendar year following the year in which written notice of its denunciation is given by one of the Contracting States to the other Contracting State.

2. If this Agreement is terminated by denunciation, rights regarding entitlement to or payment of benefits acquired under it shall be retained; the Contracting States shall make arrangements dealing with rights in the process of being acquired.

ARTICLE XXIV

1. This Agreement may be amended in the future by supplementary agreements which from their entry into force shall be considered an integral part of this Agreement. Such supplementary agreements may be given retroactive effect if they so specify.

2. The Competent Authority of either Contracting State may call a meeting for the consideration of a supplementary agreement.

ARTICLE XXV

This Agreement shall enter into force on the first day of the second month following the month in which each Government shall have received from the other Government written notification that it has complied with all statutory and constitutional requirements for the entry into force of this Agreement.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Agreement.

DONE at Washington, D.C. on FEBRUARY 19, 1982 in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:	For the Government of the Kingdom of Belgium:

FINAL PROTOCOL

to the Agreement between the United States of America and the Kingdom of Belgium on Social Security

At the time of signing the Agreement between the United States of America and the Kingdom of Belgium on Social Security, the undersigned stated that they are in agreement on the following points:

1. The Agreement shall not result in coverage under United States laws if those laws do not provide for the collection of contributions with respect to such coverage. Article 5.1 of the Agreement shall apply when Article 6.1 is not applicable as a result of the preceding sentence.

2. Article 6.1 shall apply in cases where a national of a State other than a Contracting State is sent by an employer in the territory of one Contracting State to the territory of the other Contracting State, provided that its application does not conflict with any provision of another treaty or international agreement between a Contracting State and a third State.

3. Article 6.1 shall apply in cases where a person is employed in the territory of a third State, but compulsorily covered under the laws of one of the Contracting States, and is then sent by his employer to the territory of the other Contracting State.

4. Notwithstanding Article 5 of this Agreement, Belgian nationals employed in the administrative and technical services of a Belgian diplomatic mission or consular post in the territory of the United States shall be subject to Belgian laws.

5. Where rights to benefits under Belgian laws for persons who have served in the armed forces or civil service are dependent on the completion of a minimum period of coverage either before entry into or after departure from the armed forces or civil service, periods of coverage completed under United States laws shall also be taken into account to the extent necessary.

6. The United States shall apply Chapters I and II of Part IV to nationals of a State other than a Contracting State who are not included among the persons referred to in Article 3.

7. With respect to Belgium, appeals which must be filed within a given period of time with a tribunal in Belgium shall be considered to have been timely filed if it is shown that the appeal has been filed within such period with an agency in the United States.

8. Article 4 of the Agreement shall be applied by the United States in a manner consistent with section 233(c)(4) of the United States Social Security Act.

DONE at Washington, D.C. on FEBRUARY 19 [illegible] in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:	For the Government of the Kingdom of Belgium:

ADMINISTRATIVE AGREEMENT FOR THE IMPLEMENTATION OF THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY

In conformity with Article 13(a) of the Agreement between the United States of America and the Kingdom of Belgium on Social Security of February 19, 1982 the Competent Authorities, to wit:

For the United States of America:
The Secretary of Health and Human Services,
represented by: Charles H. Price II
Ambassador of the United States of America
to the Kingdom of Belgium

For the Kingdom of Belgium:
The Minister of Social Affairs,
The Secretary of State for Pensions and
The Minister for the Middle Classes
represented by: J.L. Dehaene
Minister of Social Affairs

have agreed to the following provisions for the application of the Agreement:

CHAPTER 1

General Provisions

Article 1

1. The Agreement between the United States of America and the Kingdom of Belgium on Social Security of February 19, 1982 shall be referred to hereinafter as the "Agreement."

2. Terms used in this Administrative Agreement shall have the same meaning as in the Agreement.

Article 2

1. In conformity with Article 13(a) of the Agreement, liaison agencies shall be:

(a) For the United States: the Social Security Administration;

(b) For Belgium:
-The National Pensions Office for Salaried Employees with respect to laws referred to in Article 2.1(b)(i) regarding retirement and survivors pensions for salaried employees and self-employed persons;

-The National Sickness-Invalidity Insurance Institute with respect to laws referred to in Article 2.1(b)(ii) of the Agreement regarding invalidity insurance for salaried employees, for sailors of the merchant marine, miners, and self-employed persons;
-The National Social Security Office with respect to the application of laws referred to in Article 2.1(b)(iii) of the Agreement;
-The National Social Insurance Institute for Self-Employed Persons with respect to the application of laws referred to in Article 2.1(b)(iv) of the Agreement.

2. The Belgian liaison agencies, with the consent of the Belgian Competent Authorities, and the United States liaison agency shall agree upon joint procedures and forms necessary for implementation of the Agreement and this Administrative Agreement.

CHAPTER 2
Provisions on Coverage
Article 3

1. Where the laws of a Contracting State are applicable in accordance with Article 6.1 or 6.2 of the Agreement, the agency of that Contracting State designated in paragraph 3 shall issue upon request of the employer or self-employed person a certificate stating that the concerned employee or self-employed person remains covered by those laws and the date this coverage is expected to end.

2. In all other cases where the laws of the Contracting State are applicable in accordance with Part III of the Agreement, the agency of the Contracting State designated in paragraph 3 whose laws are applicable shall furnish upon request of the employer or self-employed person a certificate stating that the concerned employee or self-employed person is subject to the laws of that Contracting State.

3. The certificates referred to in paragraphs 1 and 2 shall be issued:
-in the United States
by the Social Security Administration

-in Belgium
by the National Social Security Office with respect to employed persons, and

by the National Social Insurance Institute for
Self-Employed Persons with respect to self-employed persons.

The agency of either Contracting State which issues a certificate referred to in paragraphs 1 and 2 shall furnish without delay a copy of the certificate to the liaison agency of the other Contracting State as needed by the latter agency.

4. In the application of Article 5.3 of the Agreement, a self-employed person shall, if requested by an agency of a Contracting State designated in paragraph 3, furnish to that agency a copy of tax returns filed with the tax authorities of the other Contracting State for any year or years specified by that agency. The person asked to provide this information shall have the requested copy or copies certified as true and exact by the tax authorities of the Contracting State with which the tax returns were filed. Pending receipt of the certified copy or copies, the agency may provisionally assess a contribution in an amount to be determined by the Competent Authority whose laws are applicable in accordance with Article 5.3 of the Agreement.

CHAPTER 3
Provisions on Benefits
Article 4

1. The liaison agency of the Contracting State with which an application for benefits is filed in accordance with Article 17 of the Agreement shall inform the liaison agency of the other Contracting State of this fact without delay, using forms established for this purpose. It shall also transmit documents and such other available information as may be necessary for the agency of the other Contracting State to establish the right of the applicant to benefits according to the provisions of Part IV of the Agreement.

2. The agency of the Contracting State with which an application for benefits has been filed shall verify the accuracy of the information pertaining to the applicant and his family members. The types of information to be verified shall be agreed upon by the liaison agencies.

3. The liaison agency of a Contracting State which receives an application filed with an agency of the other Contracting State shall without delay provide the liaison agency of the other Contracting State with such evidence and other available information as may be required to complete action on the claim.

READEX FICHE

Article 5

In the application of Articles 9, 10 and 11 of the Agreement, the Belgian liaison agency shall notify the United States liaison agency of the months in which a person completed periods of coverage under Belgian laws, and if necessary, the person's creditable earnings in any year during which periods of coverage were completed under Belgian laws.

Article 6

In the application of Articles 9, 10 and 12 of the Agreement, the United States agency shall when necessary notify the Belgian agency of the periods of coverage which a person has completed under the laws of the United States as well as the amount of the benefit to which the person is entitled.

CHAPTER 4

Miscellaneous Provisions

Article 7

In accordance with measures to be agreed upon pursuant to Article 2 of this Administrative Agreement, the agency of one Contracting State shall, upon request of the agency of the other Contracting State, furnish available information for the purpose of administering the Agreement or the laws specified in Article 2.1 of the Agreement.

Article 8

Copies of documents which are certified as true and exact copies by the agency of one Contracting State shall be accepted as true and exact copies by the agency of the other Contracting State, without further certification. The agency of each Contracting State shall be the final judge of the probative value of the evidence submitted to it.

Article 9

The liaison agencies of the two Contracting States shall exchange statistics on the payments made to beneficiaries under the Agreement for each calendar year in a form to be agreed upon. The data shall include the number of beneficiaries and the total amount of benefits, by type of benefit.

Article 10

1. Where administrative assistance is requested under Article 14 of the Agreement, expenses other than regular personnel and operating costs of the agencies providing the assistance shall be reimbursed.

2. Upon request, the agency of one Contracting State shall furnish without expense to the agency of the other Contracting State all medical information and documentation which is available relevant to the disability of a claimant or beneficiary.

3. Where the agency of a Contracting State requires that a claimant or beneficiary submit to a consultative medical examination, such examination, if requested by that agency, shall be arranged by the agency of the other Contracting State in which the claimant or beneficiary is present, in accordance with the rules of the agency making the arrangements and at the expense of the agency which requests the examination.

4. Amounts owed under paragraphs 1 and 3 shall be reimbursed upon presentation of a detailed statement of expenses.

Article 11

Unless authorized by the national statutes of a Contracting State, information about an individual which is transmitted in accordance with the Agreement to that Contracting State by the other Contracting State shall be used exclusively for purposes of implementing the Agreement. Such information received by a Contracting State shall be governed by the national statutes of that Contracting State for the protection of privacy and confidentiality of personal data.

Article 12

This Administrative Agreement shall enter into force on the date of entry into force of the Agreement and shall have the same period of validity.

Done at Brussels, on 23rd of November, 1982, in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America: Charles H Price II

For the Government of the Kingdom of Belgium:

ADDITIONAL PROTOCOL
TO THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY, SIGNED FEBRUARY 19, 1982

PROTOCOLE ADDITIONNEL
A LA CONVENTION ENTRE LES ETATS-UNIS D'AMERIQUE ET LE ROYAUME DE BELGIQUE SUR LA SECURITE SOCIALE DU 19 FEVRIER 1982

AANVULLEND PROTOCOL
BIJ DE OVEREENKOMST OVER DE SOCIALE ZEKERHEID TUSSEN DE VERENIGDE STATEN VAN AMERIKA EN HET KONINKRIJK BELGIE VAN 19 FEBRUARI 1982

ADDITIONAL PROTOCOL
TO THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY,
SIGNED FEBRUARY 19, 1982

The Government of the United States of America
and
The Government of the Kingdom of Belgium,

Considering that it is necessary to improve the manner of determining rights to benefits under Article 11 of the Agreement on Social Security between the United States of America and the Kingdom of Belgium, signed February 19, 1982,

Agree as follows :

Article 1

The final Protocol to the Agreement shall be amended by adding the following new paragraph 9 :

> "9. When entitlement to a benefit under United States laws is established in accordance with the provisions of Article 9.1 of the Agreement, the requirements of Article 10 and Article 11.3 shall be considered to be met if the agency of the United States (a) computes the theoretical basic benefit amount in accordance with United States laws based on the worker's periods of coverage and average earnings credited exclusively under United States laws, and (b) computes the pro rata basic benefit amount by applying to the theoretical basic benefit amount the ratio of the duration of the worker's periods of coverage credited under United States laws to the duration of a coverage lifetime as determined in accordance with United States laws."

Article 2

This additional Protocol shall enter into force on the date of entry into force of the Agreement and shall have the same period of validity.

DONE at Brussels on 23rd of November, 1982 in duplicate in the English, French and Dutch languages, the three texts being equally authentic

FAIT à Bruxelles, le 23 novembre 1982, en langues française, néerlandaise et anglaise, en double exemplaire, les trois textes faisant également foi.

GEDAAN te Brussel, op 23 november 1982, in tweevoud, in de Nederlandse, Franse en Engelse taal, de drie teksten zijnde gelijkelijk rechtsgeldig.

FOR THE GOVERNMENT OF
THE UNITED STATES OF AMERICA :

POUR LE GOUVERNEMENT DES
ETATS-UNIS D'AMERIQUE :

VOOR DE REGERING VAN DE
VERENIGDE STATEN VAN AMERIKA :

Charles H Price II

FOR THE GOVERNMENT OF
THE KINGDOM OF BELGIUM :

POUR LE GOUVERNEMENT DU
ROYAUME DE BELGIQUE :

VOOR DE REGERING VAN HET
KONINKRIJK BELGIE :

ATTACHMENT 2

REPORT TO CONGRESS
TO ACCOMPANY THE SOCIAL SECURITY AGREEMENT
BETWEEN THE UNITED STATES AND BELGIUM

I. INTRODUCTION

The Social Security Agreement between the United States and Belgium is intended to provide limited coordination of the old-age, survivors, and disability insurance (OASDI) programs of the two countries. The agreement is similar in content and objective to the agreements between the United States and Italy, Germany and Switzerland, which are already in force, and to an agreement with Canada which has been signed but not yet brought into force.

The U.S.-Belgium agreement consists of four separate instruments, including a principal agreement, a final protocol to the agreement, an administrative agreement and an additional protocol. The principal agreement, which is the main instrument, contains substantive bilateral provisions. The related final protocol is considered an integral part of the principal agreement and sets forth various unilateral commitments and reservations. These two documents were signed by representatives of the U.S. and Belgian Governments on February 19, 1982. The administrative agreement, which contains operating procedures for implementing the principal agreement, and the additional protocol, which authorizes the United States to apply a simplified benefit computation procedure, were subsequently signed on November 23, 1982. These four instruments, which make up the U.S.-Belgium Social Security Agreement, are now being submitted to the Congress for review in accordance with section 233(e) of the Social Security Act.

The U.S.-Belgium agreement would eliminate dual coverage, the situation that now exists when a national of one country works in the other country and is covered under and required to pay contributions to the Social Security systems of both countries for the same work. In addition, the agreement would eliminate situations where workers suffer a loss of benefit rights merely because they have divided their careers between the two countries.

Accompanying this report are paragraph-by-paragraph explanations of the principal agreement and final protocol (Annex A), the additional protocol (Annex B) and the administrative agreement (Annex C). The report required by section 233(e)(1) of the Social Security Act on the effect of the agreement on income and expenditures of the U.S. Social Security program and the number of individuals affected by the agreement is also included (Annex D), as is a description of the Belgian social security system (Annex E).

II. STATUTORY REQUIREMENTS

Section 233(c)(1) of the Social Security Act requires that international agreements concluded pursuant to that section provide for the elimination of dual coverage of the same work under the Social Security systems of the United States and the other country which is a party to the agreement, and for combining credits earned by a worker under the two systems for benefit eligibility purposes. In addition, the law stipulates that when eligibility for U.S. Social Security benefits is established on the basis of combined credits, the amount of the benefit payable under title II must be prorated in proportion to the worker's periods of coverage completed under that title. The U.S.-Belgium agreement includes these required provisions.

III. COVERAGE PROVISIONS

In conformity with section 233(c)(1) of the Social Security Act, Part III of the principal agreement sets forth rules designed to eliminate dual coverage and taxation of the same work under the U.S. and Belgian Social Security systems.

A. Rules Governing Employees

The rules which apply to employed persons provide that dual coverage under the laws of the United States and Belgium would be eliminated generally by maintaining an employee's coverage under the system of the country where the work is performed and exempting him from compulsory coverage under the system of the other country.

Special rules would apply, however, for employees who are temporarily transferred by their employers in one country to work in the other country for a period of 5 years or less. In these cases, an employee who was covered in one country before his transfer would continue to be covered under that country's system and would be exempt from coverage in the other country. Thus, an American who is transferred by his company to Belgium would only be covered under and pay contributions to the U.S. program, and he and his employer would be relieved of the additional burden of paying social security contributions to the Belgian program.

Other rules set forth in this Part would apply to persons employed by the Governments of the two countries and to persons employed in international transportation.

B. Rules Governing Self-Employed Persons

Part III also contains rules applicable to self-employed persons. They provide that a U.S. or Belgian national who resides in either the United States or Belgium and who performs self-employment in both countries would generally be covered for all of his self-employment income under the laws of his country of residence.

C. Scope of Exemptions

On the U.S. side, the coverage provisions of the agreement apply only to the OASDI program. They apply, on the Belgian side, to these same programs and also to the Belgian programs for health insurance, unemployment insurance, worker's compensation, family allowances, cash sickness benefits and annual vacations. As a result, employees and employers exempted from Belgian coverage would be relieved of total contributions equal to about 30-35 percent of payroll. The coverage provisions apply to all these Belgian programs because Belgian contributions are not earmarked for OASDI or other specific programs, and Belgian authorities therefore have no practical way to exempt workers from some programs and cover them for other programs. In most cases, Americans working temporarily in Belgium who would lose protection under Belgian programs would remain covered under governmental programs in the United States for several of these contingencies and under employer-financed programs for the others.

IV. BENEFIT PROVISIONS

Part IV of the principal agreement establishes the basic rules for determining entitlement to and the amount of U.S. and Belgian benefits for persons who have worked in both countries. These benefit provisions are included pursuant to section 233(c)(1) of the Social Security Act.

A. Provisions Applicable to the United States

1. Totalization

Under the rules which apply to the United States, if a worker has at least 6 quarters of coverage under the U.S. Social Security program, but not enough for entitlement to a U.S. benefit, the worker's coverage credits from both countries could be combined, or totalized, to qualify for a U.S. benefit. If benefit entitlement is established based on totalized credits, the amount of the benefit would be determined by combining earnings records from both countries to compute a theoretical U.S. benefit, which would then be prorated to establish a partial benefit based on the ratio of periods of coverage completed in the United States to the total periods completed in both countries. This computation method is identical to the method used in the three U.S. Social Security Agreements now in force.

2. Alternative Computation Method

Experience in implementing these earlier agreements has shown that using foreign earnings information to compute U.S. benefit amounts is cumbersome for both the United States and the other country. The time required to secure foreign earnings records can exceed a year in some countries, which causes long delays in adjudicating U.S. totalization claims.

In addition, prorating benefit amounts based on the ratio of U.S. periods of coverage to total periods in both countries can result in individuals with the same date of birth and the same average earnings and coverage under the United States system receiving significantly different U.S. totalization benefit amounts depending upon the amount of covered work they had under the foreign system. Although additional foreign coverage would generally reduce the amount of U.S. totalization benefits, it might or might not result in a compensating increase in the amount of foreign benefits, depending on the computation method used by the foreign country.

To avoid the problems created by using foreign earnings and coverage data, the Social Security Administration plans to develop a new method of computing U.S. totalization benefits within the parameters of section 233. The existing regulations which specify the current method would have to be revised to authorize any new method. Paragraph 9 of the final protocol, as amended by the additional protocol, would provide that the United States could use such an alternative computation method rather than the method described in earlier agreements. This method would shorten processing time and expedite the payment of totalization benefits. Under the alternative method, the United States would compute the theoretical benefit on the basis of a worker's earnings level during the period he was actually covered under U.S. laws. The theoretical benefit would be prorated to reflect the proportion of a coverage lifetime actually completed under the U.S. program. It is contemplated that a coverage lifetime will be defined in regulations as the number of the worker's benefit computation years; i.e., the years which must be used in determining a worker's average earnings under the regular U.S. national computation method.

The language of paragraph 9 has been drafted to allow use of the present method applied in earlier agreements if, for some unforeseen reason, the proposed new method is not adopted or the promulgation of the regulatory revision is long delayed.

3. Converting Periods of Coverage

Part IV of the agreement also establishes procedures to be followed in converting periods of coverage under the Belgian system into equivalent periods under the U.S. system. Periods of coverage under the U.S. Social Security program are measured in terms of calendar quarters while Belgian periods of coverage are measured in months. Under the agreed upon procedures, the Belgian agency would certify to the Social Security Administration the months in which a worker has coverage under the Belgian system. SSA would credit 1 quarter of coverage for every 3 months (and remaining fraction) of coverage in a calendar year certified by the Belgian agency to the extent the months do not coincide with calendar quarters of coverage credited under the U.S. system.

B. Provisions Applicable to Belgium

1. Totalization

The rules which apply to Belgium provide for totalization of U.S. and Belgian coverage credits when necessary to establish eligibility for Belgian benefits. Workers' benefit rights under the Belgian retirement and survivors insurance program are immediately vested, and the amount of the benefit is directly proportional to the amount of Belgian coverage. Because of this immediate vesting, Belgium will not need to totalize U.S. and Belgian periods of coverage to determine entitlement to or the amount of retirement and survivors benefits.

To qualify for long-term disability benefits under Belgian law, a worker generally must receive short-term cash sickness benefits for 1 year, and in order to qualify for short-term benefits, the worker must have credit for at least 120 days of coverage during the second and third calendar quarters immediately preceding the onset of the illness or disabling condition. Since the agreement does not apply to Belgian short-term cash sickness benefits, Part IV stipulates that a worker may qualify for Belgian long-term disability benefits by meeting the 120-day requirement based on a combination of U.S. and Belgian periods of coverage. Belgium will not be required to apply this provision, however, unless the worker has completed at least 18 months of coverage under the Belgian system at any time before the onset of the illness or disabling condition.

2. Elimination of Offsets

Under Belgian law, old-age, survivors, and disability benefits are reduced by the amount of any other Belgian or foreign benefits. Under the provisions of Part IV, Belgium will not reduce its benefits on account of U.S. retirement or survivors benefits, or U.S. disability benefits computed on a pro rata basis where eligibility for the U.S. benefit is based on combined credits.

C. Benefit Portability

Section 233(c)(2) of the Social Security Act permits agreements to contain provisions suspending the application of the alien nonpayment provisions of the Social Security Act (section 202(t)) for persons residing in a foreign country which is party to an agreement. Belgian nationals located outside the United States, including those located in Belgium, are already exempt from the nonpayment provisions. However, citizens of other countries who reside in Belgium may not be. The agreement therefore provides that refugees, stateless persons, and family members and survivors of refugees, stateless persons, and U.S. or Belgian nationals will be treated the same as U.S. nationals under U.S. benefit provisions while they reside in Belgium. This in effect grants such people an exemption from the alien nonpayment provisions while they reside in Belgium. Similarly, Belgian benefits would be paid to U.S. nationals regardless of where they reside and to refugees, stateless persons, and to family members and survivors of refugees, stateless persons, and U.S. or Belgian nationals while they reside in the United States.

V. OTHER PROVISIONS

Section 233(c)(4) of the Social Security Act authorizes agreements to contain other provisions not inconsistent with title II of the Act which are appropriate to carry out the purposes of the agreements. In accordance with this provision, the principal and administrative agreements contain a number of articles designed to permit the United States or Belgium to render free or reimbursable assistance to the other country in implementing the agreement.

ANNEX A

AGREEMENT

AGREEMENT
BETWEEN THE UNITED STATES OF AMERICA
AND THE KINGDOM OF BELGIUM
ON SOCIAL SECURITY

The United States of America

and

The Kingdom of Belgium

BEING DESIROUS of regulating the relationship between their two countries in the field of Social Security, have agreed to conclude an Agreement for that purpose, as follows:

ANNOTATIONS AND COMMENTS

The document is described as an "Agreement" with the understanding that it will enter into force for Belgium as a formal treaty subject to parliamentary ratification and for the United States as an executive agreement under authority of section 233 of the Social Security Act. Upon entry into force the Agreement will have the effect of law in both countries and will be binding on both countries.

AGREEMENT	ANNOTATIONS AND COMMENTS
PART I **Definitions and Laws** **Article 1** For the purposes of this Agreement:	
1. "Territory" means, as regards the United States, the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam and American Samoa, and as regards Belgium, the territory of the Kingdom of Belgium;	Article 1 defines the key terms used in the Agreement. The definition of United States "territory" is identical to the definition of the United States in section 210(i) of the Social Security Act.
2. "National" means, as regards the United States, a national of the United States as defined in Section 101, Immigration and Nationality Act of 1952, as amended, and as regards Belgium, a person of Belgian nationality;	Under section 101 of the Immigration and Nationality Act of 1952, "the term national of the United States means (A) a citizen of the United States, or (B) a person who, though not a citizen of the United States, owes permanent allegiance to the United States." Those in category (B) include natives of American Samoa and Swain's Island. A Belgian national means any person who is accorded nationality by Belgium, including, but not limited to, a person who carries a valid Belgian passport or other valid identity document designating the person as a Belgian national.
3. "Laws" means the laws and regulations specified in Article 2;	The term "laws" as used in the Agreement refers to the Social Security laws and regulations of each country as specified in Article 2. Article 2.1.a specifies the U.S. laws to which the Agreement applies.

4. "Worker" means

an employed person (un "travailleur salarie") or a person deemed equivalent to an employed person, as well as a self-employed person, as established by the respective laws;

5. "Competent Authority" means,

as regards the United States, the Secretary of Health and Human Services, and

as regards Belgium, the Minister for Social Affairs, the Minister for the Middle Classes with regard to obligations imposed by virtue of the social security system for self-employed persons and the Secretary of State for Pensions with regard to old age and survivors benefits (pensions) of the system for employed and self-employed persons;

"Agency" means,

as regards the United States, the Social Security Administration, and

as regards Belgium, any institution, agency or authority responsible for applying all or part of the laws designated in Article 2.1(b);

The term "worker" includes both employed and self-employed persons. It also includes individuals specifically defined as employees under either country's social security laws even though their status as employees is not clear under that country's usual tests of an employer-employee relationship.

"Competent Authority", as used throughout this Agreement, refers to the Government official in each country with ultimate responsibility for administering the social security program, including the provisions of the Agreement.

"Agency", as used in the Agreement, refers to the administrative body of each country which is responsible for taking and processing claims filed under each country's social security laws. The Social Security Administration is the agency for the United States. However, the U.S. Internal Revenue Service's responsibility for determining Social Security tax liability in light of SSA coverage determinations under the Agreement is not affected.

Belgium has a multitude of agencies responsible for processing claims or for the payment of benefits. The National Employees Pensions Office adjudicates all retirement and survivors claims for employees. The National Social Insurance Institute for the Self-Employed adjudicates retirement and survivors claims for the self-employed. Retirement and survivors benefits for employed and self-employed persons are actually paid by the National Retirement and Survivors Pensions Fund. Claims from employed and self-employed persons for invalidity pensions are adjudicated by one of over 1700 private mutual benefit societies approved by the Government.

AGREEMENT	ANNOTATIONS AND COMMENTS
7. "Period of coverage" means a period of payment of contributions or a period of earnings from employment or self-employment, as defined or recognized as a period of coverage by the laws under which such period was completed or any similar period insofar as it is recognized by such laws as equivalent to a period of coverage;	The term "period of coverage" includes any period which is credited under the laws of either country for purposes of determining benefit eligibility. The term includes periods of covered employment or self-employment as well as any periods of noncontributory or non-work-related coverage.
8. "Benefit" means any cash benefit provided for in the laws of either Contracting State;	"Benefit" refers to old-age, survivors, and disability benefits provided under the social security laws of either country. The term does not include benefits-in-kind provided under the social security laws of Belgium; it does include the lump-sum death payment under section 202(i) of the U.S. Social Security Act, but excludes special age-72 payments provided for certain uninsured persons under section 228 of the Social Security Act of the United States.
9. "Basic benefit amount" means, as regards the United States, the primary insurance amount as provided under United States laws, and as regards Belgium, the amount of the benefit which is payable on a worker's record under Belgian laws;	The term "basic benefit amount" is used in Part IV of the Agreement in describing how pro rata benefit amounts are to be computed where eligibility is based on combined U.S. and Belgian coverage. With respect to U.S. benefits the term means the Primary Insurance Amount as determined under section 215 of the Social Security Act.

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10. "Family member" means any person defined or recognized as a family member or designated as a member of the household by the laws under which the benefits are paid; 11. "Survivor" means any person eligible for benefits based on periods of coverage of a deceased person under the laws of each of the Contracting States;	The terms "family member" and "survivor" are used in Article 3, the provision which describes the circle of persons to whom the Agreement applies. The terms are defined to correspond to the categories of auxiliary and survivor beneficiaries under each country's social security laws. The Agreement creates benefit rights for people in these categories who are neither U.S. nor Belgian nationals, but are the family members or survivors of U.S. or Belgian nationals; the definitions are intended to make clear that each country will only pay auxiliary and survivor benefits as a result of the Agreement to people who fall into one of the various categories of family member or survivor specified in each country's respective law.
12. "Stateless person" means a person defined as a stateless person in Article 1 of the Convention relating to the Status of Stateless Persons dated September 28, 1954;	The Convention relating to the Status of Stateless Persons defines a stateless person as "a person who is not considered as a national by any State under the operation of its laws."
13. "Refugee" means a person defined as a refugee in Article 1 of the Convention relating to the Status of Refugees dated July 28, 1951, and the Protocol to that Convention dated January 31, 1967.	The Convention relating to the Status of Refugees in conjunction with the 1967 Protocol thereto defines as a refugee any person who "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it."

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Article 2

1. For the purpose of this Agreement, the applicable laws are:

   a. As regards the United States, the laws governing the Federal old-age, survivors and disability insurance program:

      (i) Title II of the Social Security Act and regulations pertaining thereto, except sections 226, 226A and 228 of that title and regulations pertaining to those sections,

      (ii) Chapter 2 and Chapter 21 of the Internal Revenue Code of 1954 and regulations pertaining to those chapters;

   b. As regards Belgium, the laws governing:

      (i) old-age and survivors pensions insurance for employed and self-employed persons,

      (ii) disability insurance for employed and self-employed persons, sailors of the merchant marine and miners,

      and, with regard to Part III only, the laws governing:

      (iii) social security for employed persons,

      (iv) the social code for self-employed persons,

      (v) sickness insurance for employed and self-employed persons,

      (vi) unemployment insurance,

      (vii) family allowances for employed and self-employed persons,

ANNOTATIONS AND COMMENTS

Article 2 specifies the laws to which the Agreement applies. For the United States, it applies to title II of the U.S. Social Security Act and the corresponding tax laws (the Self-Employment Contributions Act of 1954--SECA--and the Federal Insurance Contributions Act--FICA) and any regulations pertaining to those laws. However, the Agreement does not apply to Medicare provisions (sections 226 and 226A of the Social Security Act) or provisions for special payments to uninsured individuals age 72 or over under section 228 of the Social Security Act. Persons to whom the Agreement applies who qualify independently for Medicare hospital insurance or age-72 payments will be entitled to receive such benefits.

In Belgium a general social security system covers virtually all employed persons in the private and public sectors. This system provides benefits in the event of old-age, death, short-term sickness and long-term disability, unemployment, work accident and occupational illness, and vacations. It also provides health insurance and cash family allowances. Employees in mining and merchant seamen, however, are covered under special systems for health and disability insurance. A separate social security program applies to the self-employed and provides old-age, survivors, and disability insurance benefits, health insurance, and family allowances.

The Agreement applies to Belgian laws relating to old-age, survivors, and disability insurance for all categories of workers. In addition, the coverage provisions of the Agreement apply to all the other Belgian social security programs. As a result, a worker who goes to Belgium to work temporarily and is thus exempt from Belgian social security laws will be exempt, together with his employer, from paying Belgian social security contributions for all these programs. A worker who is subject only to Belgian laws by virtue of the Agreement will be exempt only from U.S. FICA and SECA contributions.

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(viii) annual vacations for employed persons,

(ix) work accidents in the private sector,

(x) occupational disease in the private sector.

2. This Agreement shall also apply to the same extent to future laws amending or supplementing the laws specified in this Article.

3. Unless otherwise provided in this Agreement, laws within the meaning of paragraph 1 shall not include treaties or other international agreements concluded between one Contracting State and a third State or laws or regulations promulgated for their specific implementation.

ANNOTATIONS AND COMMENTS

The Agreement automatically applies to any future laws which amend provisions of the social security laws set forth in Article 2.1.

The laws to which the Agreement applies do not include treaties or other international agreements or laws implementing them--for example, either country's social security agreements with third countries or the European Community or other multilateral agreements to which either country might be a party. The purpose of this provision is to ensure that in cases where a person has periods of coverage in the United States and Belgium and periods of coverage in a third country with which the United States or Belgium has a Social Security Agreement, periods from all three countries could not be totalized to meet U.S. or Belgian benefit eligibility requirements.

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PART II

General Provisions

Article 3

Unless otherwise provided, this Agreement shall apply to:

(a) persons who are or have been subject to the laws of a Contracting State and who are: (i) nationals of a Contracting State, or (ii) stateless persons or refugees residing in the territory of one Contracting State, as well as (iii) family members and survivors of persons in (i) or (ii);

(b) family members and survivors of persons who have been subject to the laws of a Contracting State regardless of the latter persons' nationality if the family members or survivors are nationals of a Contracting State, or stateless persons or refugees who reside in the territory of one Contracting State.

Article 4

ANNOTATIONS AND COMMENTS

Article 3 specifies categories of persons to whom the Agreement applies. These include workers who are U.S. or Belgian nationals or who are refugees or stateless persons residing in the United States or Belgium. International conventions on refugees and stateless persons provide that rights under bilateral social security agreements be extended to these groups. In addition, the Agreement applies to family members and survivors who derive rights from the above categories of nationals, refugees and stateless persons and to family members and survivors who derive rights from third country nationals if the family member or survivor is a U.S. or Belgian national or a refugee or stateless person residing in one of the two countries. Under paragraph 6 of the Final Protocol, the United States will also apply the benefit provisions of the Agreement to nationals of third countries who have periods of coverage from the United States and Belgium. See Article 1.2 and 1.10 - 1.13 for definitions of "national," "family member," "survivor," "stateless person," and "refugee".

Article 4 contains provisions on equality of treatment of persons to whom the Agreement applies and on the exportation of benefit rights. The provisions are similar in effect to those contained in other bilateral agreements concluded by the United States under section 233 of the Social Security Act. The only significant effect of these provisions on U.S. law is to allow certain third country nationals who are family members or survivors of U.S. or Belgian nationals, refugees or stateless persons and who would otherwise be subject to the alien nonpayment provisions of section 202(t) of the Social Security Act to receive U.S. auxiliary or survivor benefits under Article 4.2 while residing in Belgium. Paragraph 8 of the Final Protocol to the Agreement makes clear that Article 4 will be applied in a manner consistent with title II of the Social Security Act as required by section 233(c)(4) of that Act.

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1. Unless otherwise provided in this Agreement, the persons designated in Article 3 who reside in the territory of either Contracting State shall, in the application of the laws of a Contracting State, receive equal treatment with the nationals of that State.	Article 4.1 provides that the persons to whom the Agreement applies who reside in the United States or Belgium will be accorded the same treatment under each country's social security laws as each accords its own nationals. This paragraph establishes portability of benefits between the two countries for the designated categories of people to the extent authorized by section 233(c)(2). The paragraph is not intended to affect the coverage provisions of either country's laws.
2. Unless otherwise provided in this Agreement, the laws of a Contracting State under which entitlement to or payment of cash benefits is dependent on residence or presence in the territory of that State shall not be applicable to the persons designated in Article 3 who reside in the territory of the other State.	Article 4.2 provides that where the laws of either country require that a person be resident or present in that country in order to qualify for or receive social security benefits, the person may also qualify for or receive those benefits during periods of residence in the other country. This paragraph permits the United States to pay certain third country nationals who are family members or survivors of U.S. or Belgian nationals, refugees, or stateless persons and who would otherwise be subject to the alien nonpayment provisions of section 202(t) of the Social Security Act during periods of residence in Belgium.
3. Nationals of a Contracting State who reside outside the territories of both Contracting States shall receive benefits provided by the laws of the other Contracting State under the same conditions which the other State applies to its own nationals who reside outside the territories of both States.	Article 4.3 provides that each country will pay benefits to nationals of the other country residing outside of both countries on the same basis as it pays its own nationals residing outside both countries. This paragraph is intended to remove certain restrictions on the payment of benefits which one country may impose on nationals of the other country who reside in a third country. For the United States this provision would remove restrictions only to the extent authorized by section 233(c)(4) of the Social Security Act.

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PART III

Provisions on Coverage

Article 5

1. Unless otherwise provided in this Part or the Final Protocol, a person employed or self-employed within the territory of one of the Contracting States shall be subject only to the laws of that State even if the person resides in the territory of the other State, or if the person's employer or the offices of the employer are located in the territory of the other Contracting State.

ANNOTATIONS AND COMMENTS

Part III is intended to eliminate dual coverage, i.e., situations where a worker is covered under the laws of both countries with respect to the same services. In so doing, the existing coverage provisions of the laws of both countries are preserved to the greatest extent possible. The provisions in this Part are intended to eliminate dual coverage and taxation by continuing the worker's social security coverage and taxation under the system of the country to whose economy the worker has the more direct connection and exempting the worker from coverage and taxation under the other country's system.

Article 5.1 establishes a general territoriality rule which stipulates that ordinarily a person's work in a country will be subject to the laws on coverage of only that country. Thus, a person working in employment or self-employment covered under the laws of both countries will remain covered only under the system of the country where the work is performed and will be exempt from coverage under the system of the other country.

Articles 5.3 and 6.2 provide additional rules for eliminating dual coverage of self-employment. Article 6.1 contains an exception to the territoriality rule which applies when an employee is sent by his employer in one country to work temporarily in the other country. Articles 5.2 and 6.3 provide rules for the elimination of dual coverage in employment on ships, and Article 6.4 eliminates dual coverage of employment in air transportation. Article 7 provides rules applicable to diplomats, consular officials, and other employees of the U.S. and Belgian Governments working in the other country.

AGREEMENT	ANNOTATIONS AND COMMENTS
2. Unless otherwise provided in this Part, persons employed on a vessel which flies the flag of one of the Contracting States shall be subject only to the laws of that State, even if they reside in the territory of the other State. For the purpose of this Part, a vessel which flies the flag of the United States shall be defined as an "American vessel" under the laws of the United States.	Under Article 5.2, a person employed on a U.S. or Belgian ship who is covered under the laws of both countries will be covered only under the laws of the country whose flag the ship flies. A ship is considered to fly the flag of the United States if it is an American vessel as defined in section 210(c) of the Social Security Act, i.e., if it is documented or numbered under U.S. statutes or is not documented under the statutes of any country and the crew is employed solely by one or more U.S. citizens or residents or U.S. corporations. Under Article 6.3, if a ship of one country is in the territorial waters or a port of the other country, Article 5.2 will only apply to persons ordinarily employed on the ship while it is at sea. Others, such as cargo handlers, repairmen and maintenance crews, will be subject to the laws of the country in which they are working, unless they have been temporarily sent from the other country to perform work on the ship.
3. A person who is self-employed in the territory of both Contracting States shall be subject to the laws of only the Contracting State of which he is resident. In determining the amount of earnings creditable and contributions payable under the laws of that Contracting State, self-employment income earned within the territory of both Contracting States shall be taken into account.	The rules for coverage of self-employment are contained in Articles 5.1, 5.3 and 6.2. Under Article 5.1, a person whose self-employment is performed in just one country would be covered under the laws of that country. Under Article 5.3, a self-employed person who resides in either the United States or Belgium and who performs self-employment in both Belgium and the United States would be covered for all of his self-employment income under the laws of his country of residence. The person will therefore be responsible for reporting all of his self-employment income from both countries to the proper authorities of his country of residence. This provision will have little effect on the coverage and tax status of persons residing in the United States since U.S. citizens and residents already must report their self-employment income to IRS generally on a worldwide basis, and Belgium generally does not cover the self-employment of non-residents. U.S. citizens residing in Belgium may be subject to U.S. and Belgian social security coverage for self-employment income from the two countries. Article 5.3 would eliminate the U.S. coverage and tax liability of such people.

AGREEMENT	ANNOTATIONS AND COMMENTS
Article 6 The rules set forth in Article 5 shall be subject to the following exceptions: 1. A person who is normally employed in the territory of a Contracting State by his employer in that territory and who is sent by that employer to work for that employer in the territory of the other Contracting State, shall remain subject to the laws of only the first Contracting State, provided that the employment in the territory of the other Contracting State is not expected to last for more than 5 years.	Under Article 6.1, an employee, working for an employer located in the United States or Belgium who is temporarily transferred to work in the other country for the same employer, will continue to be covered by the country in which the employer is located. The transfer must be expected to last for not more than 5 years. Paragraph 1 of the Final Protocol provides that no provision of the Agreement may result in U.S. coverage if U.S. law contains no authority for the collection of the contributions with respect to that coverage. Thus, if a person other than a U.S. national is sent by an American employer to work in Belgium, Belgian national law will apply so that the person will generally be covered by the Belgian system. Under paragraph 2 of the Final Protocol, third country nationals sent by an employer located in Belgium to work in the United States will generally be covered by Belgian law. Paragraph 3 of the Final Protocol provides that Article 6.1 also applies when the employee is sent to work temporarily in a third country before being sent to work in the United States or Belgium.
2. A person who is normally employed or self-employed in the territory of one of the Contracting States and who pursues a self-employed activity in the territory of the other Contracting State, shall remain subject to the laws of the first Contracting State, provided that the duration of the work in the other Contracting State is not expected to last for more than 5 years.	Article 5.1 establishes coverage rules for self-employed persons who work permanently in one country, and Article 5.3 provides rules for the self-employed who travel between the countries in connection with their trade or business while maintaining their residence in one of the two countries. Under Article 6.2, a person self-employed in one country who transfers his business to the other country for a period of 5 years or less would remain subject to the laws of only the first country, even if he establishes his residence in the second country.
3. Article 5.2 shall not apply in the case of a person who is employed in the territorial waters or in a port of a Contracting State on a vessel flying the flag of the other Contracting State, if the person is not ordinarily employed at sea. In such cases Article 5.1 or Article 6.1 shall apply as appropriate.	See comments on Article 5.2.

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4. A worker who is employed in a public or private international air transport enterprise of one of the Contracting States as a member of the traveling personnel and who works in the territory of the other Contracting State on either a permanent or a temporary basis shall be subject to the laws of only the Contracting State where the enterprise is headquartered.

Article 7

1. This Agreement shall not affect the provisions of the Vienna Convention on Diplomatic Relations of April 18, 1961, or of the Vienna Convention on Consular Relations of April 24, 1963.

2. Notwithstanding Article 5, nationals of one of the Contracting States who are employed by that State in the territory of the other Contracting State but to whom the Conventions mentioned in paragraph 1 do not apply shall be subject to the laws of only the first Contracting State.

ANNOTATIONS AND COMMENTS

Under Article 6.4, a member of the flight crew of an aircraft operated by an airline with its headquarters in the United States or Belgium could be covered only by the country where the headquarters is located.

Article 7 provides coverage rules applicable to employees of the U.S. or Belgian Governments.

Article 7.1 is intended to make it clear that, in general, the categories of persons mentioned in the Vienna Conventions on diplomatic and consular relations will not be affected by the coverage provisions of the Agreement. The Conventions, to which both the United States and Belgium are parties, apply to members of the staff of a diplomatic or consular mission, including the diplomatic, consular, administrative and technical staffs; dependants of members of those staffs; the domestic service staff of the mission; and private servants employed by members of such missions.

In general, persons mentioned in the Vienna Conventions are exempt from social security coverage and contributions under the laws of the host country unless they specifically waive their immunity. Persons who waive their immunity would be subject to the coverage provisions of the Agreement if they fall within one of the categories of persons to whom the Agreement generally applies (see Article 3(a) and paragraph 2 of the Final Protocol).

Article 7.2 provides that if a U.S. or Belgian national is employed by his or her Government in the other country but is not in one of the categories mentioned in the Vienna Conventions (i.e., is employed in a non-diplomatic or consular capacity), the person will be subject only to the laws of his own country. Since almost all U.S. citizens employed by the U.S. Government abroad are excluded from U.S. social security (but covered instead under a Federal staff retirement system) this provision would continue their exempt status under both countries' social security systems.

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3. Persons employed by the United States Government in Belgium who are nationals or permanent residents of Belgium and who are not United States nationals shall be subject to Belgian laws unless they are covered under the civil service retirement system of the United States.

4. The persons referred to in paragraph 3 who are already covered by the civil service retirement system of the United States shall remain covered by that system and shall be exempt from the application of Belgian laws.

Article 8

The Competent Authorities may agree to grant an exception to the provisions of Part III in the interest of particular workers or particular categories of workers, provided that any affected worker shall be subject to the laws of one of the Contracting States.

ANNOTATIONS AND COMMENTS

Articles 7.3 and 7.4, which are included at the specific request of the Department of State and the Belgian Foreign Ministry, deal with non-U.S. citizens employed by U.S. diplomatic and consular posts in Belgium (Foreign Service Nationals--FSN's). Until recently State Department policy was generally to cover FSN's under the U.S. civil service retirement system (CSRS). Many countries, including Belgium, exclude these FSN's from coverage under their social security systems, since the U.S. Government cannot be held liable for employer contributions and reports.

State Department policy has changed in recent years to exclude newly hired FSN's from CSRS coverage and to seek agreement with host countries to cover the newly hired FSN's under the host countries' social security systems. Under these agreements the U.S. Government voluntarily agrees to pay employer contributions and to file necessary reports. FSN's already covered by the CSRS are generally permitted to continue that coverage. The State Department and Belgian Foreign Ministry have been negotiating such an Agreement for several years and view the U.S.-Belgian Social Security Agreement as an appropriate vehicle for implementing their accord.

See paragraph 4 of the Final Protocol with regard to Belgian nationals employed in the United States by Belgian diplomatic and consular posts.

Under Article 8, either country may grant an exception to the coverage rules of the Agreement provided the other country agrees and the worker involved will remain subject to the coverage laws of one of the countries. Such an exception may be granted on behalf of an individual worker or on behalf of all workers employed under similar circumstances, e.g., in the same profession or for the same employer. This provision is designed to permit the Competent Authorities to correct anomalous situations that arise to the disadvantage of workers or to eliminate dual coverage in unforeseen situations.

AGREEMENT	ANNOTATIONS AND COMMENTS
PART IV Provisions on Benefits Chapter I General Provisions Article 9	Part IV establishes the basic rules for determining benefit entitlement when an individual has worked in both countries, and the rules for determining benefit amounts when entitlement is based on combined credits. Articles 9 and 10 provide general rules applicable to both countries. Article 11 contains rules specifically applicable to the U.S. system and Article 12 deals with the Belgium system.
1. Where a person has completed periods of coverage under the laws of both Contracting States, the agency of a Contracting State which determines entitlement to benefits under its laws shall take account of periods of coverage which are creditable under the laws of the other Contracting State and which do not coincide with periods of coverage credited under its own laws.	Article 9 provides for totalization of periods of coverage where a worker is credited with periods of coverage in both countries. In determining eligibility for benefits each country would take into account periods of coverage which are credited under the laws of the other country and which were not already credited under its own laws. No determination would be made whether a period of coverage in one country would have been a period of coverage if completed in the other country.
2. An agency of a Contracting State shall not apply the provisions of Article 9.1 if the person on whose account benefits are based has sufficient periods of coverage to satisfy the requirements for entitlement to benefits under the laws of that Contracting State.	Neither country will take account of periods of coverage from the other country if those periods are not necessary to establish eligibility for a benefit. This provision is similar in effect to provisions contained in other Social Security Agreements of the United States and is based on the great probability that pro rata benefits which result from totalization would not be advantageous to anyone who is insured under national law.

AGREEMENT	ANNOTATIONS AND COMMENTS
3. Entitlement to a benefit from a Contracting State which results from Article 9.1 shall terminate with the acquisition of sufficient periods of coverage under the laws of that Contracting State to establish entitlement to a higher benefit without the need to invoke the provisions of this Article.	Article 9.2 would generally preclude benefit entitlement based on combined coverage when a person is eligible based on national law alone. As an extension of this rule, Article 9.3 provides that where entitlement based on national law alone is acquired after entitlement based on totalization, a country will terminate the entitlement based on totalization and provide the benefit based on national law alone. In the rare cases, however, where the national law benefit would be smaller than the totalization benefit previously payable, the totalization entitlement would continue rather than entitlement based on national law.
4. This Agreement shall not prevent the application of provisions of the laws of either Contracting State concerning the payment of benefits that are more favorable to the persons listed in Article 3.	This paragraph is intended to assure that anyone who receives or could receive benefits without the application of the Agreement will receive at least the same benefit amount under the Agreement. The principal effect of this provision is to guarantee continued payment of Belgian disability pensions to U.S. citizens in third countries. Under a Belgian Royal Decree such people may now receive their disability pensions while outside Belgium even though Belgian citizens generally may not. Article 9.4 is necessary since Article 4.2 only guarantees exportability of benefits if a beneficiary resides in the United States or Belgium and Article 4.3 only requires Belgium to treat U.S. citizens in third countries the same as Belgian citizens.

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5. The laws of one Contracting State which provide for reduction, suspension or termination of benefits to take account of other social security benefits or other income may be applied to beneficiaries even if benefits are being paid by virtue of the laws of the other Contracting State or if the individual receives income in the territory of the other Contracting State. However, old-age, survivors, or disability benefits (pensions) shall not be reduced by benefits of the same type if they are paid by both Contracting States in conformity with the provisions of Article 10. For the application of this paragraph, old-age and survivors benefits granted under United States laws shall be treated as benefits under Article 10.

ANNOTATIONS AND COMMENTS

Belgian law provides for the reduction of OASDI benefits by the amount of benefits payable by other social security systems. Both U.S. and Belgian law contain provisions which limit the amount of earnings (or other income in the case of Belgium) which a beneficiary may have and still receive full benefits. Article 9.5 reaffirms that, in general, these restrictions of each country's law may continue to apply when benefits are received from the other country's system or income or earnings are derived from the other country. However, as a result of Article 9.5 Belgium will no longer reduce its benefit amounts by the amount of any U.S. retirement or survivors benefit payable nor by the amount of U.S. disability benefits computed on a pro rata basis where eligibility is based on totalized credits. Since Belgium pays a full flat-rate benefit equal to 43.5% of final earnings (65% for workers with dependents) to all disabled workers who meet the Belgian insured status requirement (120 days of coverage during the second and third calendar quarters preceding disability onset) Belgium will continue to offset U.S. disability benefits which are not computed on a pro rata basis.

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Article 10

1. Where entitlement to a benefit under the laws of a Contracting State is established according to the provisions of Article 9.1, the agency of that Contracting State shall compute a theoretical basic benefit amount by considering (a) all the periods of coverage completed under its own laws and (b) all the periods of coverage completed under the laws of the other Contracting State which do not coincide with periods of coverage completed under its own laws.

2. The agency referred to in paragraph 1 shall then establish a pro rata basic benefit amount on the basis of the theoretical basic benefit amount by applying the ratio of the periods of coverage in clause (a) of paragraph 1 to the total of all periods of coverage in clauses (a) and (b) of paragraph 1.

ANNOTATIONS AND COMMENTS

Article 10 describes the method of computing benefit amounts when eligibility is established based on totalized credits. The method described is only expected to be applied in a limited number of cases. The article does not apply in the case of a worker who is insured for a benefit from a country based on coverage under that country's system alone. Since there are no duration-of-coverage requirements for Belgian retirement and survivors benefits, Belgium will only totalize periods of coverage and compute benefit amounts under Article 10 in the case of disability benefits.

The computation method described by Articles 10.1 and 10.2 is the one which the U.S. has used in all its Social Security Agreements which have been implemented to date. Under this method, a country computes a theoretical benefit amount by applying its regular benefit computation provisions to the total periods of coverage completed under the laws of both countries. In the case of the U.S., earnings during the foreign periods are also taken into account. (See Article 11.3.) This theoretical amount is then prorated, for purposes of determining the amount of the actual payment, on the basis of the ratio of periods completed under the laws of the paying country to the total periods completed in both countries.

SSA has found that this computation procedure, particularly the use of foreign earnings data, is time-consuming and prone to error. Therefore, a U.S.-Belgian Additional Protocol has been concluded which authorizes the U.S. to compute totalization benefit amounts under a new method based on periods of coverage and earnings credited exclusively under U.S. laws. Since the U.S.-Belgian Agreement and Additional Protocol are expected to enter into force only after U.S. regulations implementing the new method have been promulgated, it is not likely that the U.S. will implement the procedure described in Articles 10.1, 10.2 and 11.3. For more on the new computation method, see the annotations to the Additional Protocol.

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3. Where a pro rata basic benefit amount has been computed, all benefits payable by the agency referred to in paragraph 1 on the basis of a worker's record shall be paid on the basis of that pro rata basic benefit amount.

Chapter II

Provisions Applicable to the United States

Article 11

1. The agency of the United States shall not apply the provisions of Chapter I in the case of a worker who has less than 6 quarters of coverage under United States laws.

2. In determining eligibility for benefits under Article 9, the agency of the United States shall credit one quarter of coverage for every 3 months of coverage certified as creditable by the agency of Belgium; however, no quarter of coverage shall be credited for any calendar quarter already credited as a quarter of coverage under United States laws. The total number of quarters of coverage to be credited for a year shall not exceed four.

ANNOTATIONS AND COMMENTS

The pro rata basic benefit amount will be the basis for all social security benefits payable by a country under the Agreement on a worker's earnings record. This will also apply when the U.S. computes a pro rata benefit amount under the new method authorized by the Additional Protocol.

Article 11 describes how the rules of Chapter I will be applied to U.S. laws.

The United States will not be required to consider Belgian periods of coverage for purposes of determining benefit eligibility in the case of any worker with fewer than 6 quarters of coverage. This provision, which is included in conformity with the requirements of section 233(c)(1)(A) of the Social Security Act, is intended to avoid the administrative burden of processing benefit claims which would result in payment of only miniscule benefit amounts.

Article 11.2 establishes the procedure to be followed in converting periods of coverage under the Belgian system into equivalent periods under the U.S. system. Periods of coverage under the U.S. system are measured in terms of calendar quarters while Belgian periods of coverage are measured in months.

The Belgian agency, in accordance with Article 5 of the U.S.-Belgian Administrative Agreement for Implementation of the Agreement, will certify to the Social Security Administration the months in which a person has coverage under the Belgian system. SSA will then credit one quarter of coverage for every 3 months (and remaining fraction) of coverage certified by the Belgian agency during a calendar year to the extent the months do not coincide with calendar quarters of coverage credited under the U.S. system.

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3. For any calendar quarter credited with a quarter of coverage based on Belgian periods of coverage, the agency of the United States shall take into account for purposes of computing a theoretical basic benefit amount under Article 10 the amount of any earnings credited to the person in that period under Belgian laws, subject to the maximum annual creditable earnings limitation under United States laws.

Chapter III

Provisions Applicable to Belgium

Article 12

ANNOTATIONS AND COMMENTS

Although Article 11.3 indicates the United States will take into account earnings covered under the Belgian system for the purpose of computing totalization benefit amounts, it is not expected that this will be necessary since the Additional Protocol authorizes an alternative method of computing U.S. benefits which would eliminate the need for Belgian earnings information. (See the annotations to Article 1 of the Additional Protocol.)

Article 12 describes how the rules of Chapter I will be applied to Belgian laws. Retirement age under the Belgian social security system is generally age 65 for men and age 60 for women. Retirement benefits may be paid up to 5 years earlier with a reduction of 5 percent for every year received before normal retirement age. The benefit amount payable at normal retirement age based on a full coverage career equals 60% of indexed earnings averaged over the worker's entire career. The percentage is increased to 75% if the retiree is a married male whose wife neither works nor receives a social security benefit in her own right. The definition of a full coverage career is 36 years (in 1982) but will increase each year by one until it reaches 45 years for men in 1991 and 40 years for women in 1986. The pension for workers with less than a full coverage career is proportionately reduced. For example, a man with 12 years of Belgian coverage who retires at age 65 in 1982 will receive a pension equal to one-third the full pension.

AGREEMENT

ANNOTATIONS AND COMMENTS

A pension is payable to a widow if (1) she is at least age 45, is at least two-thirds disabled, or has a child in care on whose behalf a family allowance is payable, and (2) she was married to the worker for at least one year at the time of his death, gave birth to a child of the worker, was caring for a child on whose behalf a family allowance was payable at the time of the worker's death, or her husband died from an accident that occurred after the marriage was concluded. The amount of the widow's pension generally equals 80% of the retirement pension (married couple's rate) the worker was receiving or would have received had he continued to work without interruption until age 65. The widow's pension is thus equal to 60% of the worker's average indexed earnings.

The Belgian system pays disability benefits to workers who are at least two-thirds disabled and have received short-term cash sickness benefits for at least one year. The benefit amount equals 43.5% of the worker's final pay or 65% in the case of workers with dependents. The benefit amount is independent of the length of time the worker has been covered under the social security system.

There are no duration-of-coverage requirements for Belgian retirement or survivors benefits. These benefits can be paid with as little as one year of contributions. To be eligible for disability benefits a worker must be credited with at least 120 days of work during two recent calendar quarters. These quarters must generally be the second and third quarters preceding the quarter in which the worker first suffered the work incapacity which gave rise to short-term cash sickness benefits.

AGREEMENT

1. The agency of Belgium shall not be obliged to apply the provisions of Chapter I in the case of a worker who has less than 18 months of coverage under Belgian laws. In the case of disability insurance, the agency of Belgium shall not apply the provisions of Chapter I unless the worker has completed 18 months of coverage under Belgian laws before the beginning of the period of incapacity for work leading to a disability.

2. In determining eligibility for benefits under Article 9, the agency of Belgium shall credit 3 months of coverage for each quarter of coverage certified as creditable by the United States agency to the extent the months do not coincide with months of coverage already credited as periods of coverage under Belgian laws.

3. For periods of coverage which were completed under the laws of the United States, the Belgian agency shall credit the average of the earnings credited under Belgian laws.

4. Where under Belgian laws the basic benefit amount is determined without regard to the duration of the periods of coverage, that amount shall be considered the theoretical basic benefit amount for purposes of Article 10.1.

ANNOTATIONS AND COMMENTS

Since a worker's benefit rights under the Belgian retirement and survivors insurance program are immediately vested, and the amount of the benefit is directly proportional to the amount of Belgian coverage, Belgium will not need to totalize U.S. and Belgian periods of coverage to determine entitlement to or the amount of these benefits under Article 9. Belgium will totalize periods of coverage, however, to determine if a worker meets the recency-of-coverage requirement for disability benefits (120 days out of 2 quarters). Belgium will only do this, however, if the worker has at least 18 months of Belgian coverage acquired at any time before the work incapacity which gave rise to short-term cash sickness benefits.

In determining if the recency-of-coverage requirement for Belgian disability benefits has been met, Belgium will consider each U.S. quarter of coverage as equivalent to 3 months of Belgian coverage. A disabled worker with no Belgian coverage during the prescribed two-quarter period will therefore need two U.S. quarters of coverage during that period in order to qualify for Belgian benefits.

Where Belgium must take into account U.S. periods of coverage to establish benefit eligibility (i.e., to meet the recency-of-coverage requirement for disability benefits), Belgium will base the benefit amount solely on the worker's level of covered earnings under the Belgian system rather than taking into account earnings covered under the U.S. system.

The amount of certain Belgian benefits is determined without regard to the length of time a worker has been covered under the Belgian system. Disability benefits, for example, are equal to a fixed percentage (43.5% for single workers; 60% for workers with dependents) of the worker's final salary. In these cases, the normal procedure for computing a theoretical benefit amount under Article 10.1, which provides for a country taking into account both U.S. and Belgian periods of coverage, would have no relevance. Therefore, where a person is eligible for such benefits based on totalization, the theoretical benefit amount will be the benefit that would have been payable under Belgian law if the person had been eligible without totalization. This amount will be prorated in accordance with Article 10.2 to determine the benefit amount actually payable.

AGREEMENT

5. Where periods of coverage resulting from employment or self-employment overlap with assimilated periods, only the former shall be counted in the application of Article 10.1.

6. Where Belgian laws establish as a condition for receiving certain benefits that the periods of coverage be completed in a given profession or occupation which is subject to a special pension system, in determining eligibility for such benefits only the periods completed under United States laws in the same profession or occupation shall be totalized with periods of coverage under such special system. If the total of such periods of coverage does not result in entitlement under the special system, or if totalization of such periods does not result in payment of the highest possible benefit amount, such periods shall be used to determine eligibility for benefits of the general pension system applicable under Belgian laws to employed persons.

ANNOTATIONS AND COMMENTS

The Belgian social security system gives credit not only for periods of employment or self-employment for which compulsory contributions were paid to the Belgian system, but also for certain non-work periods for which no contributions were paid, for example, periods of disability or unemployment. It is theoretically possible that such a period of Belgian non-contributory, non-work coverage could overlap with a quarter of U.S. coverage. If this were to occur Belgium would ignore the coverage under its system in determining the amount of pro rata benefits it must pay.

Under the Belgian social security system, unreduced retirement benefits may be paid to surface miners at age 60 and to underground miners at age 55. Workers with credit for 25 years of underground coal mining may become entitled without regard to age. Special disability pensions may be paid beginning with the seventh month of invalidity to workers with credit for at least 10 years of mining work. Seamen may receive n unreduced retirement pension at age 60 if they have at least 168 months of service at sea.

Under Article 12.6 the coverage requirements for these special Belgian occupational benefits may be met with U.S. periods of coverage, but only if they were completed in an occupation or profession similar to that required for entitlement to the special benefits under the Belgian system. If the total of such U.S. and Belgian periods of coverage does not qualify the worker for the special benefits, they will nevertheless be taken into account as necessary for meeting the generally applicable requirements for Belgian OASDI benefits. Also, if it would be more favorable to the worker to have his U.S. coverage used to qualify for Belgian general benefits, rather than special occupational benefits, this will be done.

AGREEMENT

PART V

Miscellaneous Provisions

Article 13

The Competent Authorities of the two Contracting States shall:

(a) Make all necessary administrative arrangements for the application of this Agreement and designate liaison agencies;

(b) Define the procedures for reciprocal administrative assistance, including the allocation of expenses associated with obtaining medical, administrative and other evidence required for the application of this Agreement;

(c) Directly communicate to each other information concerning the measures taken for the application of this Agreement; and

(d) Directly communicate to each other, as soon as possible, information concerning all changes in their respective laws which may affect the application of this Agreement.

Article 14

The Competent Authorities and the agencies of the Contracting States, within the scope of their respective authority, shall assist each other in implementing this Agreement. This assistance shall be free of charge, subject to exceptions to be agreed upon in an administrative agreement.

ANNOTATIONS AND COMMENTS

Article 13 lists several duties of the Competent Authorities under the Agreement. It obligates them to negotiate any administrative agreements that may be necessary to implement and administer the Agreement and also to establish procedures for mutual administrative assistance in implementing the Agreement. It requires them to notify each other of the measures they have taken unilaterally to implement the Agreement, as well as any changes in their social security laws that may affect application of the Agreement. Each country must designate liaison agencies to have primary responsibility for coordinating the benefit claims and coverage determination procedures of the two countries. Under Article 2.1 of the Administrative Agreement, the U.S. liaison agency shall be the Social Security Administration, while Belgium will have four liaison agencies to handle different aspects of its social security program.

Article 14 provides authority for nonreimbursable administrative assistance between the countries in applying this Agreement. The Administrative Agreement provides for cases where assistance will be provided on a reimbursable basis as, for example, where medical examinations are procured by one country for the sole use of the other country.

AGREEMENT

Article 15

Where the laws of a Contracting State provide that any document which is submitted to a Competent Authority or an agency of that Contracting State shall be exempted, wholly or partly, from fees or charges, including consular and administrative fees, the exemption shall also apply to documents which are submitted to a Competent Authority or an agency of the other Contracting State in accordance with its laws.

Article 16

1. The Competent Authorities and agencies of the Contracting States may correspond directly with each other and with any person wherever the person may reside whenever it is necessary for the administration of this Agreement. The correspondence may be in an official language of either Contracting State.

2. An application or document may not be rejected because it is in the official language of the other Contracting State.

3. Documents and certificates which are presented for purposes of this Agreement shall be exempted from requirements for authentication by diplomatic or consular authorities.

ANNOTATIONS AND COMMENTS

If the laws of one country exempt documents from fees or charges, that country must also apply the exemption with respect to documents which are sent to the other country by or on behalf of a claimant or beneficiary.

Article 16.1 authorizes direct correspondence between the Competent Authorities and agencies of the two countries and between these bodies and any person with whom they may need to communicate. The U.S. Competent Authority and agency may correspond in English, and the Belgian Competent Authority and agencies may correspond in French, Dutch, or German.

The agencies of each country may not reject an application or document because it is in an official language of the other country. The United States already accepts applications and documents without regard to the language in which they are written.

Some countries require that the authenticity of documents which are submitted to their social security authorities by or on behalf of persons in another country be certified by their diplomatic or consular officials in the other country. (The United States has no such requirements.) Under Article 16.3 neither country will impose such requirements with respect to documents required to be submitted under the Agreement.

AGREEMENT

Article 17

1. A written application for benefits filed with an agency of one Contracting State shall protect the rights of the claimants under the laws of the other Contracting State if the applicant (a) requests that it be considered an application under the laws of the other Contracting State or (b) in the absence of a request that it be so considered, it appears in the determination of a claim based on that application that the person on whose record benefits are claimed has completed periods of coverage under the laws of the other Contracting State.

2. An applicant may request that an application for old-age or survivors benefits filed with an agency of one Contracting State not be considered an application under the laws of the other Contracting State or that the application be effective on a different date in the other Contracting State within the limitations of and in conformity with the laws of the other Contracting State.

ANNOTATIONS AND COMMENTS

Under Article 17.1, a written application submitted to the agency of one country will protect a claimant's right to benefits under the laws of the other country as if the application had been presented in the other country, provided the applicant expresses an intent to file for benefits in the other country when the application is filed. Because an applicant may not be fully aware of benefit rights in the other country, Article 17.1 also provides that in the absence of an expression of intent, the application will protect the claimant's rights in the other country if, at the time of filing, the applicant indicates that the person on whose record benefits are based had been covered under social security in the other country.

Under Article 17.2 a person who applies for retirement or survivors benefits from one country may specify that his application is not to be considered an application for benefits from the other country or is to be given a different effective date in the other country within the limits of the laws of the other country. This provision could be of importance, for example, to people who wish to take advantage of delayed retirement credit provisions under the other country's laws. Article 17.2 does not apply to applications for disability benefits. This is because Belgian national law stipulates that any person claiming Belgian disability benefits must also file a claim for any foreign disability benefits, including U.S. benefits, for which he may be eligible. If Article 17.2 were to apply to disability applications, thereby permitting claimants for Belgian disability benefits to defer filing for U.S. benefits, the provision would be in conflict with Belgian law. Although Article 17.2 excludes disability applications it neither affects U.S. application requirements nor creates any obligation under U.S. law to file an application for disability benefits.

AGREEMENT

3. If, according to Belgian laws, the eligibility to certain benefits is determined without an application, the date the eligibility is established under Belgian laws shall, within the limits provided in United States laws, be considered as the basis for a claim for any corresponding benefit under United States law.

4. The provisions of this Agreement shall apply only to an application for benefits which is filed on or after the date this Agreement enters into force.

ANNOTATIONS AND COMMENTS

Under the Belgian disability insurance program a disabled worker must receive short-term cash sickness benefits for one year before he can qualify for long-term disability benefits. After the year is completed his condition is automatically evaluated by a board which determines eligibility for long-term disability benefits without an application from the worker. Under Article 17.3, if the Belgian authorities notify SSA that they have determined a person to be eligible for disability benefits, SSA could recognize that notification to the extent permitted by U.S. law. Because of limitations in U.S. law this provision is likely to have only minor significance. SSA will consider the notification of the Belgian authorities as a "lead". If the notification includes a written statement signed by the worker and indicating an intent to claim U.S. benefits, the date that the statement is filed with the Belgian agency can be accepted as the date of filing for U.S. benefits. If no such statement of the worker is included, SSA will seek to notify the claimant of his rights under U.S. law.

Article 17.4 requires that a person claiming benefits under the Agreement file an application either on or after the date the Agreement enters into force. If a person filed an application prior to this date, a new application is necessary.

AGREEMENT	ANNOTATIONS AND COMMENTS
Article 18	
An application, appeal or other document which according to the laws of a Contracting State must be submitted to an agency of that Contracting State within a specified period shall be considered to have been timely filed if it is submitted within the same period to an agency of the other Contracting State. In such case, the agency with which the application, appeal or document has been filed shall indicate the date of receipt on the document and transmit it without delay to the liaison agency of the other Contracting State.	Article 18 provides that an application, appeal, or other document which must be filed within a time limit with an agency of one country shall be considered filed timely if filed within such limit with an agency of the other country. The agency with which the application, appeal, or document is filed shall transmit it without delay to the liaison agency of the other country indicating the date the document was received.
Article 19	
1. Payments under this Agreement may be made in the currency of the Contracting State making the payment.	Benefits to be paid by a country under this Agreement will generally be paid in the currency of that country. This corresponds to the current general practice of both countries regarding benefit payments.
2. In case provisions designed to restrict the exchange or exportation of currencies are introduced by either Contracting State, the Governments of both Contracting States shall immediately decide on the measures necessary to insure the transfer of sums owed by either Contracting State under this Agreement.	Should either country impose restrictions on the exchange of its currency, steps shall be taken to assure the payment of amounts that are due under the Agreement.
Article 20	
1. Disagreements between the two Contracting States regarding the interpretation or implementation of this Agreement shall, as far as possible, be settled by the Competent Authorities.	Article 20.1 would obligate each country to attempt to resolve any dispute between them regarding the Agreement through direct consultation or negotiation.
2. If a disagreement cannot be resolved pursuant to paragraph 1 by the Competent Authorities, it shall, at the request of either Contracting State, be submitted for binding arbitration in accordance with procedures to be agreed upon by the Contracting States.	Article 20.2 would require both States, at the request of either State, to establish an arbitral procedure in any case when disagreements could not be resolved by the Competent Authorities.

PART VI

Transitional and Final Provisions

Article 21

1. This Agreement shall not establish any claim to payment of a benefit for any period before its entry into force or a lump-sum death benefit if the person died before its entry into force.

2. Consideration shall be given to periods of coverage under the laws of either Contracting State occurring before the entry into force of this Agreement, in order to determine the right to benefits under this Agreement; except that neither State shall take into account periods of coverage occuring prior to the earliest date for which periods of coverage may be credited under its laws.

3. Subject to the provisions of paragraph 1, this Agreement shall also apply to events relevant to rights under the laws which occurred prior to its entry into force.

4. This Agreement shall not result in the reduction of cash benefit amounts because of its entry into force.

Article 22

The attached Final Protocol shall form an integral part of this Agreement.

Article 23

1. This Agreement shall remain in force and effect until the expiration of 1 calendar year following the year in which written notice of its denunciation is given by one of the Contracting States to the other Contracting State.

Under Article 21.1, benefits payable as a result of the Agreement will be paid only for periods beginning with the date on which the Agreement enters into force. Any lump-sum death payments under section 202(i) of the U.S. Social Security Act will be payable under the Agreement only if the death occurs on or after the date the Agreement enters into force.

In determining benefit eligibility and amounts under the Agreement, Article 21.2 provides that periods of coverage occurring before the Agreement enters into force will be taken into account. However, the United States will not take into account Belgian periods of coverage completed before 1937, the first year for which coverage could be credited under the U.S. Social Security program.

Under Article 21.3, events material to a case such as marriage, death, disablement, or attainment of a certain age, which occur prior to the effective date of the Agreement, will be considered in applying the Agreement.

Article 21.4 assures that anyone receiving benefits at the time the Agreement enters into force will continue to receive at least the same benefit amount after the Agreement enters into force.

Article 22 makes the Final Protocol an integral part of the Agreement.

Article 23.1 provides for the Agreement to remain in effect until the expiration of 1 calendar year after the year notice of termination is given by one of the countries.

AGREEMENT

2. If this Agreement is terminated by denunciation, rights regarding entitlement to or payment of benefits acquired under it shall be retained; the Contracting States shall make arrangements dealing with rights in the process of being acquired.

Article 24

1. This Agreement may be amended in the future by supplementary agreements which from their entry into force shall be considered an integral part of this Agreement. Such supplementary agreements may be given retroactive effect if they so specify.

2. The Competent Authority of either Contracting State may call a meeting for the consideration of a supplementary agreement.

Article 25

This Agreement shall enter into force on the first day of the second month following the month in which each Government shall have received from the other Government written notification that it has complied with all statutory and constitutional requirements for the entry into force of this Agreement.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Agreement.

Done at Washington, D. C. on February 19, 1982 in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:	For the Government of the Kingdom of Belgium:
(signed)	(signed)
John A. Svahn	R. Schoumaker

ANNOTATIONS AND COMMENTS

Article 23.2 provides that, in the event of termination of the Agreement, a person will retain benefit rights acquired before termination; supplementary agreements would determine the extent to which each country would recognize benefit rights in the process of being acquired at the time of termination --for example, periods of coverage which had not yet resulted in fully insured status.

Article 24 provides for amending the Agreement by supplementary agreements and provides for the possible retroactive effect of such agreements. After a supplementary agreement becomes effective, it will thereafter be considered an integral part of the Agreement. Either State may call a meeting for consideration of a Supplementary Agreement.

Each country will follow its own constitutional procedures for approval of the Agreement. The Belgian Parliament will have to approve the Agreement. In the United States, the Agreement will have to be presented to the Congress for a review period of 90 session days as required by section 233(e) of the U.S. Social Security Act. The Agreement will enter into force on the first day of the second calendar month after each Government has received formal notification of approval from the other Government.

AGREEMENT

FINAL PROTOCOL

to the Agreement between the United States of America and the Kingdom of Belgium on Social Security

At the time of signing the Agreement between the United States of America and the Kingdom of Belgium on Social Security, the undersigned stated that they are in agreement on the following points:

1. The Agreement shall not result in coverage under United States laws if those laws do not provide for the collection of contributions with respect to such coverage. Article 5.1 of the Agreement shall apply when Article 6.1 is not applicable as a result of the preceding sentence.

2. Article 6.1 shall apply in cases where a national of a State other than a Contracting State is sent by an employer in the territory of one Contracting State to the territory of the other Contracting State, provided that its application does not conflict with any provision of another treaty or international agreement between a Contracting State and a third State.

ANNOTATIONS AND COMMENTS

The Final Protocol, which under the terms of Article 22 forms an integral part of the Agreement, contains provisions which are for the most part unilateral commitments or reservations to the Agreement.

Paragraph 1 is intended to make clear that the Agreement will not result in an extension of U.S. Social Security coverage if there is no authority in U.S. law to impose Social Security taxes with respect to the work. (There is, at present, no provision in U.S. law for extending Social Security taxation under a section 233 agreement.) For example, a Belgian national employed outside the United States by an American employer would not be covered under the U.S. program, notwithstanding the equal treatment provisions of Article 4 or the provision concerning transferred employees under Article 6.1.

Under paragraph 2, a third country national sent from Belgium to the United States by his employer located in Belgium will continue to be covered under Belgian social security laws and exempt from U.S. coverage. (If the third country national is sent from the United States to Belgium, Belgian laws will apply as a result of paragraph 1 of the Final Protocol.) However, to the extent that this provision conflicts with another international Social Security Agreement, it will not apply. A conflict could arise, for example, under the Agreement between the United States and Italy, if an Italian national is sent from Belgium to the United States by an Italian employer.

AGREEMENT	ANNOTATIONS AND COMMENTS
3. Article 6.1 shall apply in cases where a person is employed in the territory of a third State, but compulsorily covered under the laws of one of the Contracting States, and is then sent by his employer to the territory of the other Contracting State.	Article 6.1 of the Agreement provides that an employee sent from one country to work temporarily in the other country will continue to be covered by the country from which he is sent. Paragraph 3 makes clear that Article 6.1 will apply even if the employee is not sent directly to the other country but first is assigned to work in a third country.
4. Notwithstanding Article 5 of this Agreement, Belgian nationals employed in the administrative and technical services of a Belgian diplomatic mission or consular post in the territory of the United States shall be subject to Belgian laws.	Belgian nationals employed in the administrative and technical services of a Belgian diplomatic or consular post are currently exempt from U.S. social security coverage (unless they are also U.S. nationals) and may be covered under the Belgian system on a voluntary basis. Paragraph 4 permits Belgium to cover such persons on a compulsory basis.
5. Where rights to benefits under Belgian laws for persons who have served in the armed forces or civil service are dependent on the completion of a minimum period of coverage either before entry into or after departure from the armed forces or civil service, periods of coverage completed under United States laws shall also be taken into account to the extent necessary.	Belgian social security law confers certain advantages to persons who have served in the Belgian armed forces or civil service. For example, where a person's military service interrupts a period of covered employment, and the person returns to covered employment within 30 days after his discharge from the military and becomes incapacitated for work shortly thereafter, his entire period of military service will be disregarded in determining if he meets the 120 day/2 quarter requirement for disability benefits. (For an explanation of this requirement, see comment regarding Article 12.) Under paragraph 5, periods of U.S. coverage would be taken into account to determine if the Belgian military service had interrupted covered employment or if the worker had returned to covered employment within the required time limit.
6. The United States shall apply Chapters I and II of Part IV to nationals of a State other than a Contracting State who are not included among the persons referred to in Article 3.	Paragraph 6 is intended to make clear that provisions of the Agreement concerning U.S. benefits will apply to third country nationals as well as U.S. and Belgian nationals. Thus, any person credited with periods of coverage in both the United States and Belgium can have those periods totalized for the purpose of determining eligibility for U.S. benefits regardless of nationality. Payment of benefits of such persons--whether based on totalized credits or not--will be subject to the provisions of U.S. law, including the alien nonpayment provision of section 202(t).

AGREEMENT

7. With respect to Belgium, appeals which must be filed within a given period of time with a tribunal in Belgium shall be considered to have been timely filed if it is shown that the appeal has been filed within such period with an agency in the United States.

8. Article 4 of the Agreement shall be applied by the United States in a manner consistent with section 233(c)(4) of the United States Social Security Act.

Done at Washington, D. C. on February 19, 1982 in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:	For the Government of the Kingdom of Belgium:
(signed)	(signed)
John A. Svahn	R. Schoumaker

ANNOTATIONS AND COMMENTS

Appeals which must be filed within a time limit with a Belgian court and which are presented within the time limit to the U.S. Social Security Administration will be considered to have been timely filed with the Belgian court. However, U.S. courts incur no obligations as a result of this provision.

Section 233(c)(1) of the Social Security Act requires U.S. international Social Security Agreements to contain certain benefit and coverage provisions. Section 233(c)(2) permits agreements to contain exceptions to the alien nonpayment provisions of the Social Security Act for beneficiaries residing in the other country. In addition, section 233(c)(4) permits agreements to contain other appropriate provisions which are not inconsistent with the provisions of title II of the Social Security Act. Paragraph 8 of the Final Protocol is intended to make clear that where the only authority for the equality of treatment provisions of Article 4 of the Agreement is section 233(c)(4), these provisions will be applied by the United States only to the extent they do not conflict with other provisions of title II of the Social Security Act.

ADDITIONAL PROTOCOL TO THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY, SIGNED FEBRUARY 19, 1982

The Government of the United States of America and the Government of the Kingdom of Belgium, considering that it is necessary to improve the manner of determining rights to benefits under Article 11 of the Agreement on Social Security between the United States of America and the Kingdom of Belgium, signed February 19, 1982

agree as follows:

ADDITIONAL PROTOCOL

Article 1

The Final Protocol to the Agreement shall be amended by adding the following new paragraph 9:

"9. When entitlement to a benefit under United States laws is established in accordance with the provisions of Article 9.1 of the Agreement, the requirements of Article 10 and Article 11.3 shall be considered to be met if the agency of the United States (a) computes the theoretical basic benefit amount in accordance with United States laws based on the worker's periods of coverage and average earnings credited exclusively under United States laws, and (b) computes the pro rata basic benefit amount by applying to the theoretical basic benefit amount the ratio of the duration of the worker's periods of coverage credited under United States laws to the duration of a coverage lifetime as determined in accordance with United States laws."

ANNOTATIONS AND COMMENTS

Articles 10 and 11 of the U.S.-Belgian Social Security Agreement of February 19, 1982, provide for the computation of U.S. totalization benefits in the same manner established in the other U.S. Social Security Agreements now in force. Under this method, when a person qualifies for U.S. benefits on the basis of combined U.S. and foreign periods of coverage, a theoretical benefit amount is determined by combining the person's U.S. and foreign earnings records. The combined earnings (indexed if the worker qualifies for a computation based on average indexed monthly earnings (AIME)) are averaged over the number of months in the worker's benefit computation years. These are generally the years from 1951, or, if later, the year of attainment of age 22, up to the year the worker reaches age 62, becomes disabled, or dies, disregarding 5 years of low earnings in retirement or survivors cases, and zero to 5 years in disability cases. The theoretical benefit amount is determined by applying the regular U.S. national benefit formula to the person's average monthly earnings (AME) or, where appropriate, the person's AIME, which was derived on the basis of combined earnings records. The theoretical benefit is then reduced to reflect the fact that the person worked only part of his career under the U.S. system. Thus, the benefit that is actually payable equals the theoretical benefit amount multiplied by the ratio of U.S. periods of coverage to total periods of coverage under the programs of the United States and the other agreeing country.

Each country, including Belgium, with which we have discussed the possibility of concluding a Social Security Agreement has expressed concern over the need to furnish the United States with detailed data on a worker's earnings under its system. Furnishing this information, which may not even be used under its system, has been administratively burdensome. The Social Security Administration has experienced long delays in obtaining foreign earnings information in some cases. Converting foreign earnings into equivalent U.S. dollar amounts and manipulating it in the U.S. benefit computation has proven to be a laborious operation, which by its nature is time-consuming and prone to error. The length of time needed to obtain foreign earnings information has resulted in long delays in awarding U.S. totalization benefits in a significant number of cases.

In addition, prorating benefit amounts based on the ratio of U.S. periods to total periods in both countries can result in individuals with the same date of birth and the same average earnings and coverage under the United States system receiving significantly different U.S. totalization benefit amounts depending upon the amount of covered work they had under the foreign system. Although additional foreign coverage, by increasing the denominator of the pro rata ratio, would generally reduce the amount of U.S. totalization benefits, it might or might not result in a compensating increase in the amount of foreign benefits, depending on the computation method used by the foreign country.

SSA has been working to develop a new method of computing U.S. totalization benefits that would not require information on foreign earnings and thus would avoid the problems connected with the current computation method. The existing regulations that specify the current method would have to be revised to authorize any new method. Under a proposed new method that appears most promising, Belgian social security coverage would be combined with U.S. coverage to establish entitlement to a U.S. totalization benefit, but Belgian earnings would not be considered in computing the amount of the benefit. Only the worker's earnings and periods of coverage under the U.S. Social Security program would be taken into account.

4.

Under this proposed method, the theoretical benefit amount would be based on the worker's U.S. earnings or, where appropriate, indexed earnings, averaged over the period he actually worked under the U.S. system, rather than over all the worker's benefit computation years as under the current method. The theoretical benefit amount would be computed by applying a regular U.S. national benefit formula to the worker's AME or AIME so derived. The benefit actually payable would be determined by multiplying the theoretical benefit amount by the ratio of the worker's U.S. quarters of coverage to the number of calendar quarters in a period generally equal to the worker's benefit computation years.

Under this proposed method, the theoretical benefit would approximate the benefit amount to which the worker would have been entitled had he worked a full lifetime under the U.S. system at the same relative earnings level as during his actual periods of U.S. coverage. The prorata benefit that is payable would reflect the portion of the worker's coverage lifetime spent under the U.S. system.

The proposed new method is comparable to the computation methods used by most Western industrialized countries which compute totalization benefits based only on earnings credited under their own social security systems. It would greatly expedite the processing of claims by the Social Security Administration since the time-consuming process of securing foreign earnings records would have been eliminated. Since the theoretical benefit would be prorated without regard to the length of the worker's foreign coverage, U.S. totalized benefit amounts would be the same for all individuals with the same date of birth and the same average earnings and coverage periods under the U.S. system.

Article 2

This Additional Protocol shall enter into force on the date of entry into force of the Agreement and shall have the same period of validity.

Done at Brussels on November 23, 1982 in duplicate in the English, French, and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:	For the Government of the Kingdom of Belgium:
(signed)	(signed)
Charles H. Price, II	J. Dehaene

This Additional Protocol would revise the U.S.-Belgian Agreement of February 19, 1982 to permit the United States to apply an alternative computation method along the lines of the new method being considered for inclusion in U.S. regulations. By concluding the Additional Protocol now, rather than after the new method is incorporated in U.S regulations, it should be possible to save considerable negotiating time and expense and to avoid the administrative complications of implementing the new computation method after the principal Agreement has already entered into force. The language of Article 1 of the Additional Protocol has been drafted in general terms to allow some flexibility in the development of the U.S. regulations and to allow use of the present method if, for some unforeseen reason, the proposed new method is not adopted or the promulgation of the regulatory revision is long delayed.

The Additional Protocol will enter into force on the same date as the principal Agreement and will remain in effect for the same period as the principal Agreement. It is anticipated that regulations specifying the alternative computation method will be in effect before the agreements enter into force, so that all U.S. benefits to which entitlement is based on the principal Agreement will be computed under the alternative method.

ANNEX C

ADMINISTRATIVE AGREEMENT FOR THE IMPLEMENTATION OF THE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE KINGDOM OF BELGIUM ON SOCIAL SECURITY OF FEBRUARY 19, 1982

In conformity with Article 13(a) of the Agreement between the United States of America and the Kingdom of Belgium on Social Security of February 19, 1982 the Competent Authorities, to wit:

For the United States of America:
The Secretary of Health and Human Services,
represented by

____

For the Kingdom of Belgium:
The Minister for Social Affairs
The Minister for the Middle Classes
The Secretary of State for Pensions
represented by

____

have agreed to the following provisions for the application of the Agreement:

AGREEMENT

CHAPTER I

General Provisions

Article 1

1. The Agreement between the United States of America and the Kingdom of Belgium on Social Security of February 19, 1982 shall be referred to hereinafter as the "Agreement."

2. Terms used in this Administrative Agreement shall have the same meaning as in the Agreement.

Article 2

1. In conformity with Article 13(a) of the Agreement, liaison agencies shall be:

   (a) For the United States, the Social Security Administration;

   (b) For Belgium:

      --The National Pensions Office for Salaried Employees with respect to laws referred to in Article 2.1(b)(i) regarding retirement and survivors pensions for salaried employees and self-employed persons;

      The National Sickness-Invalidity Insurance Institute with respect to laws referred to in Article 2.1(b)(ii) of the Agreement regarding invalidity insurance for salaried employees, for sailors of the merchant marine, miners and self-employed persons;

      The National Social Security Office with respect to the application of laws referred to in Article 2.1(b)(iii) of the Agreement;

ANNOTATIONS AND COMMENTS

Article 1 deals with the meaning of terms. The term "Agreement," when used by itself, means the U.S.-Belgian Social Security Agreement. Other terms used in both the Agreement and this Administrative Agreement, whether defined in the Agreement or not, shall have the same meaning as in the Agreement.

Article 2.1 designates the liaison agencies that will have primary responsibility for coordinating benefit claim and coverage determination procedures in the two countries. The Social Security Administration (SSA) is the U.S. liaison agency. Belgium will have two liaison agencies to deal with benefit claims procedures: the National Pensions Office for Salaried Employees with respect to old-age and survivors benefits and the National Sickness/Invalidity Insurance Institute with respect to disability benefits. Belgium will have two additional liaison agencies to deal with coverage matters: The National Social Security Office with respect to the coverage of employed persons and the National Social Insurance Institute for Self-Employed Persons with respect to the coverage of the self-employed.

AGREEMENT

--The National Social Insurance Institute for Self-Employed Persons with respect to the application of laws referred to in Article 2.1(b)(iv) of the Agreement.

2. The Belgian liaison agencies, with the consent of the Belgian Competent Authorities, and the United States liaison agency shall agree upon joint procedures and forms necessary for implementation of the Agreement and this Administrative Agreement.

CHAPTER 2

Provisions on Coverage

Article 3

1. Where the laws of a Contracting State are applicable in accordance with Article 6.1 or 6.2 of the Agreement, the agency of that Contracting State designated in paragraph 3 shall issue upon request of the employer or self-employed person a certificate stating that the concerned employee or self-employed person remains covered by those laws and the date this coverage is expected to end.

ANNOTATIONS AND COMMENTS

Article 2.2 authorizes and requires the United States and Belgian liaison agencies to agree upon those procedures and forms which must be prepared jointly for the implementation of the Agreement and Administrative Agreement.

Article 3 establishes procedures pursuant to Part III of the Agreement for the elimination of dual social security coverage and taxation of the same work under the systems of both the United States and Belgium.

Paragraph 1 provides that where a person is temporarily transferred from one country to the other and the laws of the sending country continue to apply in accordance with Articles 6.1 or 6.2 of the Agreement, the agency of the sending country will issue a certificate to that effect when requested to do so by the sending employer or self-employed person. When presented to the appropriate agency of the other country, the certificate will establish the basis for the exemption of the person from the coverage laws of that country. Retroactive recovery of U.S. contributions paid with respect to services for which a coverage exemption has been in effect would be subject to the time limitations for refunds of taxes in the Internal Revenue Code.

AGREEMENT

2. In all other cases where the laws of a Contracting State are applicable in accordance with Part III of the Agreement, the agency of the Contracting State designated in paragraph 3 whose laws are applicable shall furnish upon request of the employer or self-employed person a certificate stating that the concerned employee or self-employed person is subject to the laws of that Contracting State.

3. The certificates referred to in paragraphs 1 and 2 shall be issued:

--in the United States

by the Social Security Administration

--in Belgium

by the National Social Security Office with respect to employed persons, and

by the National Social Insurance Institute for Self-Employed Persons with respect to self-employed persons.

The agency of either Contracting State which issues a certificate referred to in paragraphs 1 and 2 shall furnish without delay a copy of the certificate to the liaison agency of the other Contracting State as needed by the latter agency.

ANNOTATIONS AND COMMENTS

Paragraph 2 extends the procedure described in paragraph 1 to cases where workers are subject to the laws of only one country by virtue of Agreement provisions other than Articles 6.1 and 6.2. For example, a U.S. citizen employed permanently in Belgium by an American employer will be covered only by Belgium in accordance with Article 5.1, and may need a certificate of Belgian coverage to establish the basis for an exemption from U.S. social security taxation for himself and his employer.

Paragraph 3 designates the agencies responsible for issuing coverage certificates and provides for a copy of any certificate issued to be furnished to the appropriate liaison agency of the other country.

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4. In the application of Article 5.3 of the Agreement, a self-employed person shall, if requested by an agency of a Contracting State designated in paragraph 3, furnish to that agency a copy of tax returns filed with the tax authorities of the other Contracting State for any year or years specified by that agency. The person asked to provide this information shall have the requested copy or copies certified as true and exact by the tax authorities of the Contracting State with which the tax returns were filed. Pending receipt of the certified copy or copies, the agency may provisionally assess a contribution in an amount to be determined by the Competent Authority whose laws are applicable in accordance with Article 5.3 of the Agreement.

CHAPTER 3

Provisions on Benefits

Article 4

1. The liaison agency of the Contracting State with which an application for benefits is filed in accordance with Article 17 of the Agreement shall inform the liaison agency of the other Contracting State of this fact without delay, using forms established for this purpose. It shall also transmit documents and such other available information as may be necessary for the agency of the other Contracting State to establish the right of the applicant to benefits according to the provisions of Part IV of the Agreement.

ANNOTATIONS AND COMMENTS

Paragraph 4 is included at the request of Belgium to help the Belgian authorities implement Article 5.3 of the Agreement. Under Article 5.3 a person who resides in Belgium and who performs self-employment in both the United States and Belgium will be covered by Belgium with respect to his self-employment income from both countries. In order to verify the extent of the person's liability for contributions under the Belgian system, the Belgian liaison agency may require the self-employed person to obtain certified copies of his income tax returns for specified years from the U.S. Internal Revenue Service and submit them to the appropriate Belgian liaison agency. The Belgian Minister for the Middle Classes may establish a provisional level of contributions to be assessed on the self-employment income derived from the United States until the tax returns are submitted. It is not intended that U.S. agencies will apply this provision.

Articles 4.1 and 4.3 outline the procedures to be followed by both countries for the exchange of pertinent information needed to process claims filed under the Agreement.

AGREEMENT

2. The agency of the Contracting State with which an application for benefits has been filed shall verify the accuracy of the information pertaining to the applicant and his family members. The types of information to be verified shall be agreed upon by the liaison agencies.

3. The liaison agency of a Contracting State which receives an application filed with an agency of the other Contracting State shall without delay provide the liaison agency of the other Contracting State with such evidence and other available Information as may be required to complete action on the claim.

Article 5

In the application of Articles 9, 10, and 11 of the Agreement, the Belgian liaison agency shall notify the United States liaison agency of the months in which a person completed periods of coverage under Belgian laws, and, if necessary, the person's creditable earnings in any year during which periods of coverage were completed under Belgian laws.

ANNOTATIONS AND COMMENTS

Both U.S. and Belgian law require that certain information about individuals claiming benefits be verified (e.g., age and family relationship to the worker) before the claim can be approved. Article 4.2 provides that when a claim for benefits under the Agreement is filed in one country, the agency of that country will verify the relevant information and inform the agency of the other country of its findings. The purpose of this provision is to expedite the claims process by avoiding the duplication of effort which would result if the agencies of both countries were required to verify the same information. Although an agency may accept the findings of the other agency concerning the accuracy of information, it may at its discretion request documentary evidence to support those findings.

Under Article 5, if totalization is necessary to establish a person's right to U.S. benefits in accordance with Article 9 of the Agreement, the Belgian liaison agency will furnish SSA a record showing the number of months of coverage the person has earned under the Belgian system.

Although Article 5 also authorizes Belgium to furnish earnings information to the U.S. for the purpose of computing totalization benefit amounts, this may not be necessary. Article 11.3 of the Agreement (as in earlier bilateral Social Security agreements concluded by the United States) would provide that the Social Security Administration take into account the dollar equivalent of the Belgian earnings in computing the U.S. totalization benefit. However, the Additional Protocol permits an alternative method of computing U.S. benefits which, if adopted in the HHS regulations, would eliminate the need for Belgian earnings information. (See annotations to Additional Protocol.)

AGREEMENT

Article 6

In the application of Articles 9, 10 and 12 of the Agreement, the United States agency shall when necessary notify the Belgian agency of the periods of coverage which a person has completed under the laws of the United States as well as the amount of the benefit to which the person is entitled.

ANNOTATIONS AND COMMENTS

Article 6 provides that where totalization is necessary to establish a person's right to Belgian benefits in accordance with Article 9.1 of the Agreement, the Social Security Administration will furnish the Belgian liaison agency a record showing the number of quarters of coverage the person has earned under the U.S. system. In determining eligibility for Belgian benefits, Belgium, in accordance with Article 12.2 of the Agreement, will credit 3 months of coverage for each quarter of U.S. coverage to the extent that any such month is not already credited as a month of coverage under the Belgian system. Where Belgium must take into account the amount of any U.S. benefit to establish the amount of the Belgian benefit that is payable, the Social Security Administration will also furnish the Belgian liaison agency with the amount of the U.S. benefit. It is understood by both sides that this information will only be provided upon request and with the written consent of the person concerned.

AGREEMENT	ANNOTATIONS AND COMMENTS
CHAPTER 4	
Miscellaneous Provisions	
Article 7	
In accordance with measures to be agreed upon pursuant to Article 2 of this Administrative Agreement, the agency of one Contracting State shall, upon request of the agency of the other Contracting State, furnish available information for the purpose of administering the Agreement or the laws specified in Article 2.1 of the Agreement.	Article 7 provides that the agency of one country may upon request furnish claims-related information to the agency of the other country in accordance with agreed upon procedures. Such procedures will be agreed upon by the liaison agencies and will be consistent with the governing statutes of both countries.
Article 8	
Copies of documents which are certified as true and exact copies by the agency of one Contracting State shall be accepted as true and exact copies by the agency of the other Contracting State, without further certification. The agency of each Contracting State shall be the final judge of the probative value of the evidence submitted to it.	If the agency of one country certifies that a copy of a document it furnishes to the agency of the other country is a true and exact copy of an original document, the other country will accept this certification. The agency of each country will remain the final judge of the probative value of documents submitted to it from whatever source.
Article 9	
The liaison agencies of the two Contracting States shall exchange statistics on the payments made to beneficiaries under the Agreement for each calendar year in a form to be agreed upon. The data shall include the number of beneficiaries and the total amount of benefits, by type of benefit.	Article 9 provides for an exchange of statistics concerning the number of beneficiaries and the types and amount of benefits paid under the Agreement.
Article 10	In accordance with Article 14 of the Agreement, the Competent Authorities and agencies of the two countries will provide each other with such administrative assistance as may be necessary to implement the provisions of the Agreement. Article 10 of the Administrative Agreement specifies the types of assistance which will be provided without cost and the types which will be provided on a reimbursable basis.

AGREEMENT	ANNOTATIONS AND COMMENTS
1. Where administrative assistance is requested under Article 14 of the Agreement, expenses other than regular personnel and operating costs of the agencies providing the assistance shall be reimbursed.	Under Article 10.1, expenses incurred in responding to requests for administrative assistance which require an agency to go outside its own organization to provide the assistance, such as hiring interpreters or conducting special field investigations, shall be paid by the requesting agency. Expenses for regular personnel and operating costs will not be reimbursed.
2. Upon request, the agency of one Contracting State shall furnish without expense to the agency of the other Contracting State all medical information and documentation which is available relevant to the disability of a claimant or beneficiary.	Where one agency requests medical information from the other agency, the other agency will send to the requesting agency pertinent and available medical information in its possession free of charge.
3. Where the agency of a Contracting State requires that a claimant or beneficiary submit to a consultative medical examination, such examination, if requested by that agency, shall be arranged by the agency of the other Contracting State in which the claimant or beneficiary is present, in accordance with the rules of the agency making the arrangements and at the expense of the agency which requests the examination.	Where a medical examination is necessary to establish eligibility for or continuing entitlement to benefits under one country's system and the claimant or beneficiary resides in the other country, the agency of the country of residence shall upon request arrange for the examination at the expense of the agency requesting the examination.
4. Amounts owed under paragraphs 1 and 3 shall be reimbursed upon presentation of a detailed statement of expenses.	In order to receive reimbursement for administrative assistance, the agency which provides the service must present the requesting agency with a statement of expenses.
Article 11 Unless authorized by the national statutes of a Contracting State, information about an individual which is transmitted in accordance with the Agreement to that Contracting State by the other Contracting State shall be used exclusively for purposes of implementing the Agreement. Such information received by a Contracting State shall be governed by the national statutes of that Contracting State for the protection of privacy and confidentiality of personal data.	Both the United States and Belgium have statutes that provide strict safeguards for maintaining the confidentiality of information pertaining to individuals which is in the possession of their respective Governments. In the United States these statutes include the Freedom of Information Act, the Privacy Act, the Tax Reform Act of 1976, the Government in the Sunshine Act, and pertinent provisions of the Social Security Act and other related statutes. Article 11 provides that personal information pertaining to an individual which one country furnishes to the other under the Agreement will be protected in accordance with the applicable provisions of the other country's privacy and confidentiality laws.

AGREEMENT

Article 12

This Administrative Agreement shall enter into force on the date of entry into force of the Agreement and shall have the same period of validity.

Done at Brussels on November 23, 1982 in duplicate in the English, French and Dutch languages, the three texts being equally authentic.

For the Government of the United States of America:

(signed)

Charles H. Price II

For the Government of the Kingdom of Belgium:

(signed)

J. Dehaene

ANNOTATIONS AND COMMENTS

The Administrative Agreement will enter into force on the same date as the Agreement and will remain in effect for the same period as the Agreement.

ANNEX D
REPORT TO CONGRESS ON THE FINANCIAL EFFECT OF THE U.S.-BELGIUM SOCIAL SECURITY AGREEMENT

This report presents estimates of benefit costs and reduction in contribution income resulting from the proposed totalization agreement with Belgium. The estimates are based on the assumption that the agreement will become effective October 1, 1983.

Additional OASDI benefit payments in fiscal year 1984, over and above payments under present law, are estimated to total $55,000. These additional payments will be made to persons who are not now eligible for OASDI benefit payments but who would become immediately eligible for such benefits under the totalization agreement. Data from the Immigration and Naturalization Service Annual Reports were used as a basis for the following estimates of the number of persons living in the United States who would become immediately eligible for a totalized OASDI benefit:

Total	90
Retired or disabled	70
Dependents and survivors	20

Because of a lack of detailed information about the number of Americans emigrating to Belgium, it is difficult to make a reliable estimate of the number of persons living in Belgium who would become eligible for OASDI benefit payments because of the agreement. In estimating additional OASDI benefit payments, it was assumed that the number of persons living in Belgium who would become eligible for a United States benefit is negligible.

The agreement would not affect the eligibility requirements for Belgian retirement and survivor benefits since there is no minimum coverage requirement for these benefits. It was assumed that the number of persons not now eligible for Belgian disability benefits who would become eligible for such benefits as a result of the totalization agreement is negligible.

A summary of the estimated effect of the proposed totalization agreement with Belgium on benefit payments and tax contributions in fiscal year 1984 is shown below (in millions):

1. Additional benefit payments from U.S. system	(1/)
2. Reduction in tax contribution income to the U.S. system	$4
3. Total effect on U.S. system	4
4. Additional benefit payments from Belgium to U.S. residents	(1/)
5. Reduction in tax contributions paid by U.S. employees and employers to Belgium	22
6. Net effect on U.S. balance of payments[2]	18

1/ Less than $500,000.

2/ Represents net total of lines 4 and 5 less line 3.

The ongoing number of persons becoming eligible for OASDI benefits as a result of the agreement is estimated to be less than 20 annually.

About 900 employees and their employers in the United States would no longer make tax contributions to the OASDI and HI Trust Funds as a result of the agreement.

Approximately 2,000 United States employees and their employers in Belgium would no longer be required to pay Belgian social security taxes.

ANNEX E

Social Security in Belgium

I. Introduction

Social security in Belgium comprises a broad range of programs that pay generous benefits and require large contributions relative to other countries. The programs are characterized by extreme decentralization in administration with a great many mutual aid associations, insurance funds, and local government bodies responsible for taking claims and paying benefits. This decentralization is rooted in Belgian social history. Mutual aid associations have existed in Belgium since the middle of the nineteenth century. Until the beginning of the twentieth century the State provided subsidies to these associations but did not intervene further in the field of social policy.

The first compulsory social insurance scheme in Belgium--insurance against work accidents--was introduced in 1903. Compulsory old-age and survivors insurance for miners appeared in 1911. The period between the two World Wars saw the largest expansion of the Belgian social security system. Compulsory pensions insurance for manual workers appeared in 1924 and for white collar employees in 1925. Compulsory insurance against occupational diseases was introduced in 1927. A family allowance program--the first in the world--was introduced in 1930, while a compulsory annual vacation program (considered a social security program in Belgium) was introduced in 1936.

In 1944 a decree law codified all the branches of social security and added a program of compulsory sickness/invalidity insurance (including insurance against the cost of health care) and a program of unemployment insurance. A 1969 law substantially revised the 1944 act, primarily by incorporating many amendments which had been enacted over the years.

II. Coverage

The 1969 law encompassing all social security programs is generally applicable to each employer having a place of business in Belgium and all workers employed in Belgium. The law covers both manual and white collar employees; however, the law differentiates between these two groups for certain benefit and contribution purposes. Services are generally covered if they are performed for remuneration under the authority of an employer and within a contractual arrangement. Employees are covered regardless of sex, age or citizenship. The interval at which employees are paid and the form of payment (pay on the basis of time, piece-work, tips, etc.) are not material in determining coverage.

Coverage for some or all programs may also be extended by governmental decree to persons who perform service for remuneration under the authority of another person but without being subject to an employment contract. Coverage for all programs has been extended under this provision to: managerial representatives of nonindustrial and noncommercial organizations, such as professional organizations, trade unions and cooperatives; entertainers; temporary employees placed by employment agencies; homeworkers; commission drivers; handicapped persons subject to a contract of apprenticeship for vocational rehabilitation; certain other persons under professional training programs; lockkeepers, guards and toll collectors of the dike and drainage system; and professional scholars in certain research organizations. Coverage for health insurance and a limited number of other programs has been extended to other groups of noncontractual workers. For example, sickness/invalidity (including health care), pensions, and unemployment insurance has been extended to temporary employees of the national, provincial and communal governments and all staff (except managers covered under a staff retirement system) of public corporations other than the Belgian railways; certain academic or scientific staff of State educational institutions; and lay employees of subsidized private institutions of secondary education.

Certain categories of workers subject to an employment contract have been covered under the 1969 law for only certain programs. This has been the case most notably for full-time employees of the national and provincial governments and their instrumentalities who are covered only for sickness/invalidity insurance, retirement and survivors pensions, and unemployment insurance.

Coverage abroad--Where no international agreement is in effect, a Belgian national who is sent by his employer to work abroad remains covered under the Belgian system for up to 6 months, with an extension for 6 additional months if the employer and employee both request it.

Wages covered--Covered wages include remuneration in cash and in kind, bonuses, tips, and commissions. Covered wages do not include vacation allowances or supplementary benefits paid by an employer on account of work accident or occupational illness.

Exclusions--The 1969 law excludes from the general social security program: workers whose employment is secondary to their principal occupation or whose employment ordinarily lasts two hours or less per day (except entertainers, educators, clergymen, homeworkers, and certain cleaning staff); students who work less than one month between July 1 and September 30 and who are not otherwise covered during the rest of the year; domestic employees who do not live on their employer's premises, and who work less than 4 hours per day for the same employer and less than 24 hours per week for all employers; and doctors employed in health care institutions who receive remuneration other than a fixed salary, if they are covered under the social security system for self-employed workers for medical services performed outside the institutions.

Special programs--Miners and workers in related industries, merchant seamen, and self-employed workers are excluded from coverage under the 1969 law since they are covered under special programs. The miners' and seamen's programs are similar to those for manual and white collar employees but with some differences in contribution rates and benefit age requirements and computations. Self-employed workers have a completely separate system of social security. They have been compulsorily covered for family allowances since 1938, old-age and survivors pensions insurance since 1956, sickness insurance since 1964 and invalidity insurance since 1971.

Voluntary coverage--Belgian citizens and aliens residing in Belgium who are not otherwise covered for retirement and survivors pensions may contribute voluntarily to acquire this coverage.

III. Contributions

Employers and Employees

Employers are responsible for enrolling covered employees with the National Social Security Office (NSSO), withholding their employees' contributions from wage and salary payments, and remitting employer and employee contributions to the NSSO. The employer must remit a single contribution payment for all the branches of social security; however, the total percentage of payroll or earnings that is payable is based on percentage rates that are specified for each branch.

The following table illustrates the contribution rates for each branch and the percentage of total benefit expenditures provided by subsidies from the national government. In the past, some programs have included ceilings on payroll or earnings subject to contributions; however, beginning in 1983, all ceilings will be eliminated. The law provides for reintroducing a ceiling under the unemployment program when the number of unemployed persons falls below 300,000.

Branch	Contributions (%) Employers[1]	Employees	Total	Approximate Rate of State Subsidization -- 1980 Estimate (% of total expenditures)
Retirement and Survivors	8.86	7.00	15.86	16.0
Sickness/Invalidity[2]				
Medical Benefits	3.75	1.80	5.55	42.0
Cash Benefits	2.20	1.15[3]	3.35[4]	53.0
Family Allowances	7.00	None	7.00	0.1
Unemployment	1.23	0.87	2.10	79.0
Occupational Illness	0.70[5]	None	0.70[5]	54.0
Occupational Injury	0.30[6]	None	0.30	Unknown
Annual Vacation	14.75[7]	None	14.75[7]	Unavailable

1/ Beginning July 1, 1981, the total employer tax rate with respect to payroll for wage earners for all social security programs is lowered by 6.17 percentage points. Some industries, such as oil, electricity, and insurance, which are either highly profitable or employ comparatively few wage earners, are not eligible for the reduction.

2/ A 5-percent surcharge is levied on automobile insurance premiums to help finance the sickness/invalidity program. Retirement and survivors pensioners whose income is above a specified level contribute 1.8 percent of their pension for health insurance coverage.

3/ 0.75% for white-collar workers.

4/ 2.59% for white-collar workers.

5/ 0.6% for white-collar workers.

6/ Plus an insurance premium which varies according to risk--average cost about 0.8% for white-collar workers; 2.75% for blue-collar workers.

7/ Employers must contribute to special funds for vacation allowance with respect to blue-collar workers; employers of white-collar workers are required to pay allowances directly to the worker. For the period beginning 1981 and continuing until decree (anticipated in 1983), the rate is reduced to 6.0%.

Legislation that went into effect in 1977 is designed to redistribute the burden of contributions from small to large employers. Thus, employers receive an annual credit of 5% of the quarterly contributions due during the preceding calendar year up to a total credit of BF 9,000 per quarter. On the other hand, all employers must pay an annual contribution surcharge equal to 1.4% of all contributions due for the preceding calendar year in excess of BF 600,000 per quarter.

Self-employed

The self-employed contribute only toward old-age and survivors pensions, sickness/invalidity insurance, and family allowances. Contribution rates vary according to the level of total earnings and whether the earnings are from a principal or secondary self-employment activity. The following table illustrates these rates for 1980.

Branch	Total Earnings From A Principal Self-Employment Activity (BF)			Total Earnings From A Secondary Self-Employment Activity (BF)		
	0-188,805	188,806-613,618	613,619-944,027	0-44,132	44,133-188,805	188,806-944,02
Sickness/ Invalidity						
Medical Benefit	BF 4.437	2.35%	2.35%	-0-	9.2% For Sickness/ invalidity benefits, family allowances and OASI pensions	Same as for principal self-employme activity
ash Benefits	BF 963	0.51%	6.85% for sickness/ invalidity cash benefits, family allowances and OASI pensions	-0-		
Family Allowances	BF 6,627	3.51%		-0-		
OASI Pensions	BF 13,273	7.03%		-0-		
TOTAL	BF 25,300	13.4%	9.2%	-0-	9.2%	

Contributions payable in a given year are based on self-employment earnings from the third preceding year indexed for increases in consumer prices. For example, contributions for 1980 are based on 1977 self-employment earnings multiplied by 1.1757. Earnings amounts in the headings of the preceding table represent indexed amounts.

Self-employed persons must also pay dues toward the administrative expenses of the insurance fund in which they are enrolled.

IV. Benefits

Retirement and Survivors Pensions

Retirement pensions—Unreduced retirement pensions are payable under the employees' and self-employed persons' systems at age 65 for men (age 64 without actuarial reduction under the employees' system if the man has worked at least 45 years in a customary and principal occupation) and at age 60 for women. Pensions based on surface mining are payable at age 60; those based on underground mining are payable at age 55 or at any age if the worker has completed at least 25 years of underground mining work. Pensions based on maritime employment are payable at age 60 after 14 months of service at sea.

Under the employees' and self-employed persons' systems, retirement pensions may be claimed as early as age 60 for men or age 55 for women but the pension is reduced by 5 percent for each year it is received before normal retirement age. If part of a person's pension is based on work as a seaman or miner, and part on other work, only the latter is subject to reduction on account of early retirement.

There is no minimum coverage requirement for receipt of retirement or survivors pensions under either the employees' or self-employed persons' systems.

Before 1970, retirement and survivors pensions were only payable to Belgian residents, except as otherwise provided by international agreement. Since 1970 pensions are also payable abroad to Belgian nationals, stateless persons, and refugees.

The retirement pension payable at normal retirement age to a person with a full work career under the employees', miners', and seamen's systems equals 60% of average indexed career earnings. A male retiree's pension is increased to 75% of average indexed career earnings if he has a wife who neither works nor receives a pension under Belgian or foreign law. A full work career for someone reaching normal retirement age in 1982 is 36 years. The definition of a full career will increase each year by one until it reaches 45 years for men in 1991 and 40 years for women in 1986. The pension for workers with less than a full work career is proportionately reduced. For example, a single man with only 12 years of work credit who retires at age 65 in 1982 will receive a retirement pension equal to one-third of the full pension. Creditable years of work may date back to 1926. Years of work after normal retirement age may be used to complete a less-than-full work career.

If an employee worked before July 1, 1970 in noncovered employment which would have been covered as of that date, he may pay contributions retroactively to cover the blank years, subject to the approval of the National Pensions Office for Salaried Workers. Voluntary contributions may also be paid to cover years of study after age 20 and years during which a woman raises her child until the age of 3 years (age 6 if handicapped). In addition, certain nonwork periods such as periods of involuntary unemployment, invalidity or short-term disability, confinement for childbirth and military service, are deemed equivalent to work periods without payment of contributions.

Individual earnings records have only been maintained since 1955 for manual workers, 1956 for seamen, 1958 for white collar workers, and 1968 for miners. Actual earnings amounts are taken into account for computing benefits based on each category of work beginning with those dates. Periods of coverage before those dates are credited with flat-rate amounts which are determined by regulation and indexed to price increases. For each year before 1955 the flat-rate amount as of January 1982 for all categories of work except underground mining is BF 270,581. The flat-rate amount for underground mining before 1955 equals BF 324,696. As of January 1982, white collar employees receive flat-rate amounts of BF 408.63, BF 436.97 and BF 468.81 for each work day in 1955, 1956 and 1957, respectively. In addition to these flat-rate amounts for periods of work before actual earnings were recorded, regulations establish deemed earnings amounts for non-work periods which are taken into account for benefit computations.

Earnings amounts for each year are indexed to reflect price changes from the time the earnings were derived to a point in time shortly before receipt of the pension.

The self-employed person's retirement pension is not earnings-related. A full pension based on a full work career equals a flat-rate amount of BF 119,995 in 1981. For a married couple the full pension equals BF 149,994 in 1981. The amounts are increased based on changes in the Belgian consumer price index (CPI). As under the employees' system, a full career in 1982 equals 36 years but will eventually equal 45 years for men and 40 years for women. Pensions are proportionately reduced for less than full work careers.

Pensions under the employees' and self-employed persons' systems are subject to a retirement test established by regulation. Except under limited circumstances a person may not receive a social security benefit and work without the prior approval of the National Employees' Pensions Office. As of November 1981, a beneficiary who receives the prior approval of the National Office may earn up to BF 14,464 per month without having the pension suspended. Self-employed workers may earn up to BF 136,082 per calendar year. The above amounts are adjusted in relation to changes in the CPI and are increased by 50 percent for pensioners who have a dependent child. Except in the case of a man who is receiving a married couple's pension, the retirement test applies only to the pensioner's earnings and not his or her spouse's.

A person receiving a retirement pension may not simultaneously receive a sickness, invalidity or unemployment benefit. Work accident or occupational disease benefits may be paid simultaneously with retirement pensions unless the accident or disease resulted in an increase in the amount of the retirement pension.

Survivors pensions--Widows' pensions are payable to surviving women who are at least 45 years of age and who were married to the worker for at least one year at the time of the worker's death. A young widow's pension is payable at any age if the widow has a child in care on whose behalf a family allowance is payable or the widow is at least two-thirds disabled. Widow's pension is also payable at any age if the husband's principal occupation for at least 20 years was underground mining. If the marriage lasted less than one year, the widow's pension may still be paid if a child was born of the marriage, the worker's death was caused by an accident after the marriage was concluded, or at the time of the worker's death the couple was caring for a child on whose behalf a family allowance was being paid.

If a widow does not meet the age or duration-of-marriage requirements, a transitional widow's pension is payable for up to 12 months. Similarly, a woman who was receiving a widow's pension and subsequently remarries, or who was receiving a widow's pension before age 45 and no longer meets the requirements for a young widow's pension, continues to receive the pension for 12 months.

Recipients of widow's pensions are subject to the same earnings limitation and prohibition on simultaneous receipt of other pensions which apply to retirement pensioners.

No survivors pensions are paid to widowers or surviving children. However, orphans receive substantially higher allowances than other children under the family allowance program.

If the worker was receiving a retirement pension at the time of death, the widow's pension equals 80% of the worker's pension (computed at the married couple rate and without considering any actuarial reduction in the husband's benefit due to early retirement). If the worker died before receiving a retirement pension, the widow receives 80% of the retirement pension (at the married couple rate) the worker would have received if he had worked to age 65.

Vacation allowance--An annual vacation allowance is payable to persons receiving a retirement or survivors pension in May of any given year. In 1980 this amount equaled BF 3,659 for recipients of the married couple's pension and BF 2,194 for other beneficiaries.

Sickness/Invalidity Insurance

Belgian sickness-invalidity insurance is divided into two sectors: health care and cash benefits.

Qualifying requirements--To qualify for health care or cash benefits, a worker must be enrolled with one of the about 1,700 mutual aid associations or the Auxiliary Sickness/Invalidity Fund. In addition, the person must have credit for at least 120 work days during a six-month period generally comprising the second and third calendar quarters preceding the application for benefits. In determining the number of workdays completed, days during which a person was prevented from working due to work accident or occupational disease, unemployment, lockout or legally sanctioned strikes, as well as legally recognized annual vacation days and paid holidays, are considered equivalent to work days.

Widows, pensioners, and orphans are exempt from the recency-of-work test for purposes of qualifying for health care benefits; however, if a widow's or retiree's pension is based on less than one-third of a full work career, the pensioner must pay a monthly contribution for health care insurance.

Health care benefits--Under the health care program, a beneficiary generally must pay medical and hospital bills directly and then apply to his mutual aid association or the Auxiliary Fund for reimbursement. In some cases where medical charges are particularly high, the social security agency may be billed directly so that the insured person pays in advance only the amount of any coinsurance. The program covers the cost of preventive and curative health care, including hospitalization, routine examinations and prescription drugs, specialist care, obstetrical care and delivery, and prostheses, as well as functional and vocational rehabilitation.

Rates of reimbursement are fixed by regulation in accordance with negotiated tariff schedules. Physicians, dentists, and pharmacists are free to charge more than the scheduled rates; however, for those who abide by the tariff schedule the National Sickness/Invalidity Insurance Institute makes a supplementary contribution to increase the amount of their eventual retirement, survivors or invalidity pensions. The program reimburses up to 100% of the scheduled tariffs for hospitalization; however, for certain "routine care," which includes visits and consultations by doctors, dentists, physiotherapists, and diagnostic services, the reimbursement is limited to 75%. Widows, orphans, and retirement and invalidity pensioners generally receive 100% reimbursement even for these charges if their income does not exceed certain limits. For prescription drugs an insured person pays a flat amount to the pharmacist. The difference between the full price and the flat amount is paid by the social security agency.

As of April 1982, an old age pensioner whose monthly pension exceeds BF 24,344 (or BF 28,851 if the pensioner has dependents) is required to contribute 1.8 percent of their pension amount for health insurance coverage.

Cash sickness/invalidity benefits--Belgian labor law provides for guaranteed wage payments to compensate the initial period of work incapacity due to illness. The employers of most white collar workers must continue full salary for the first 30 days of illness. For manual workers and those white collar workers not entitled to full salary for the first 30 days, the employer must pay full salary for the first 6 days of illness. For the next 24 days, the social security agency pays 60% of earnings and the employer supplements this with 29% of earnings for manual workers and 30.5% of earnings for white collar workers.

After the first month of illness the social security agency continues to pay 60% of earnings up to a maximum of BF 1,523 a day (as of August 1982) for up to one year (6 months in the case of miners). Women on maternity leave may receive, in addition to the 60% wage replacement, a supplement equal to 19.5% of earnings for 6 weeks before and 8 weeks after confinement. The supplement is provided under the family allowance program and is only payable for periods during which the woman is not receiving guaranteed wage payments from her employer.

After one year of disability an invalidity pension is payable equal to 43.5% of the worker's most current earnings if he has no dependents. Workers with dependents (including workers who are divorced or separated and required to make support payments, or whose physical or mental condition necessitates the constant attendance of a third person) receive an invalidity pension equal to 65% of prior earnings. As of August 1982, the maximum daily invalidity pension equals BF 1,106 (BF 1,652 for workers with dependents). A minimum daily invalidity pension equal to BF 686 for single workers and BF 857 for workers with dependents is payable to disabled individuals who meet a test of prior regular employment. Benefits are adjusted automatically in relation to changes in the CPI.

A person is considered incapacitated for work if he has ceased all work and his impairment or functional disorder has reduced his earnings capacity to one-third or less of the amount a person with the same training and education could earn. During the first 6 months of incapacity the percentage of loss of earnings capacity is measured in relation to the amount that could be earned in the disabled person's usual occupation.

A funeral grant of BF 19,282 (as of April 1982) is payable under the sickness/invalidity program to the person who incurred the funeral expenses of a covered worker or pensioner, provided that the person either lived with or was related to the deceased. Otherwise, the person who incurred the expenses may receive only the lesser of the actual expenses incurred or BF 9,641 (as of April 1982).

Cash benefits are only payable beginning with the date on which a worker notifies his social security agency of his disability; however, if the worker notifies the agency within 28 days (7 days in the case of manual workers and some white collar workers) he may receive benefits as soon as his employer-provided full-salary replacement is discontinued. Unemployed workers must report their disability to the regional bureau of the National Employment Office.

Payments are stopped if a beneficiary resumes work without notifying his social security agency. A person who regains up to 50 percent of his work capacity may return to work "appropriate to his state of health" subject to the approval of his agency. Benefits are reduced by 10 percent so long as the disabled worker refuses to participate in a program of functional or vocational rehabilitation.

Cash sickness/invalidity benefits may be reduced by the amount of other benefits payable under Belgian or foreign law based on the same sickness or injury.

Other Social Security Programs

Work injury—With the exception of civil servants and military servicemen, the Belgian work injury program covers all employees who are covered by one of the social security systems for manual and white collar employees, miners, or seamen. Protection is provided through private insurance policies which employers are required to purchase from an approved insurance company or a joint insurance fund.

Occupational disease—The occupational disease insurance program covers those under the general social security system (manual and salaried employees, miners and seamen), as well as unemployed and disabled workers, unpaid apprentices, and students whose training exposes them to the risk of occupational disease. Employers must insure themselves with the Occupational Diseases Fund.

Unemployment insurance—To be eligible for unemployment benefits a person must be out of work and without earnings (including pay in lieu of notice), must be registered at an employment office, and be capable, willing, and available for work. His unemployment must not be voluntary or due to misconduct, strike, or unjustified refusal of a suitable job offer. The person also must have completed a specified number of days of work within a certain period preceding his application. A so-called "pre-pension" may be paid under the unemployment insurance program to workers discharged involuntarily after reaching age 60 or to men aged 60 or women aged 55 who leave their job voluntarily and are replaced by a worker under age 30.

Family allowances--The program covers employers who are established in Belgium or have a place of business there, and who employ one or more persons on a regular basis or for a period expected to last at least 150 work days. In general, family allowances are payable on behalf of children of workers employed at least 4 hours a day on at least 100 days per year. Allowances are also paid to the children of pensioners, workers receiving unemployment benefits and certain other unemployed persons, handicapped persons, students and abandoned wives. Allowances are generally paid on behalf of children up to the age of 16.

Annual Vacations--Workers who are covered under social security are also covered under an annual vacation program. This program mandates the minimum amount of annual vacation for employees and the amount of vacation pay. The program is organized differently for manual workers and white collar workers. Employers of manual workers must be enrolled with and pay contributions to one of several annual vacation funds. Under the law a manual worker who was employed by one or more employers on at least 276 days during the preceding calendar year is entitled to 24 days of annual paid vacation. Vacation pay for manual workers equals 14 percent of the earnings attributable to the preceding calendar year. This is intended to represent double pay for the first 3 weeks of vacation and regular pay for the fourth week. The payments are made by the annual vacation fund to which the employer is affiliated. White collar workers receive 2 days of paid vacation for every month of service for one or more employers. The employer himself is obligated to continue the employee's regular salary during vacation and pay a bonus equal to 1/16 of this regular salary for each month of service completed during the preceding calendar year. Thus, an employee who worked 12 months during the preceding year receives 24 vacation days at 1 3/4 pay which is roughly comparable to the vacation pay of manual workers.

V. Administration

Management of the various Belgian social security programs is carried out by a large number of public and private agencies. However, the collection of contributions is highly centralized with the National Social Security Office collecting employer and employee contributions in a global amount for all the social security programs except work accident insurance. The NSSO distributes the revenue collected among the various agencies responsible for paying benefits.

Social security contributions for employers and employees in mining and shipping, as well as for the self-employed, are collected by other agencies: the National Retirement Fund for Miners, the Aid and Welfare Fund for Sailors Sailing under the Belgian Flag, and the various social insurance funds in which the self-employed are enrolled.

General supervision of the sickness/invalidity insurance program is entrusted to the National Sickness/Invalidity Insurance Institute. However, actual administration of the program rests with more than 1,700 mutual aid associations. Employees and self-employed persons must register with an association of their choosing. The associations are joined into 126 federations and 5 national unions which are designated as Christian, Socialist, liberal, professional, or independent. Alternatively, workers may choose to enroll with a governmental body, the Auxiliary Sickness/Invalidity Insurance Fund. The individual associations process benefit claims and make payments.

Earnings records for retirement and survivors insurance are maintained by a semi-public organization, the General Retirement and Savings Fund. Applications for retirement and survivors pensions are filed with the mayor of the applicant's commune or, if the applicant is abroad, the National Employees' Pensions Office which adjudicates all claims. Benefit payment is made by the National Retirement and Survivors Pensions Fund. Self-employed workers must enroll with one of 17 social insurance funds for the self-employed. Failing this, they are automatically enrolled with the Auxiliary National Social Insurance Office for the Self-employed. Retirement and survivors benefit claims under the self-employed persons' system are adjudicated by the National Social Insurance Institute for the Self-employed, while payment is made, as for employees, by the National Retirement and Survivors Pensions Fund. The self-employed file their claims with their local mayor, or if abroad, with the National Institute.

The social security administrative bodies are generally supervised by boards of directors which consist of equal numbers of employer and employee representatives and an independent chairman; e.g., a judge or a Member of Parliament. Under the family allowances and sickness/invalidity programs, representatives of other special interests are included, namely family organizations and representatives of hospitals and the medical profession. Responsibility for general administrative oversight and formulation of social policy, however, remains with the competent cabinet minister; i.e., the Minister of Social Welfare for retirement and survivors pensions, sickness/invalidity insurance, work injury and occupational disease insurance, family allowances, and annual vacations; and the Minister of Employment and Labor for unemployment insurance. The Minister for the Middle Classes is responsible for retirement and survivors insurance, sickness/invalidity insurance and family allowances for the self-employed.

Appeals under the Belgian social security system are heard at three levels: before labor tribunals, labor appeals courts, and in the final instance the Belgian "Cour de Cassation" (Supreme Court). The labor tribunals have jurisdiction over matters involving social security benefits and the social security obligations of employers, self-employed persons and beneficiaries. There are 9 labor tribunals, each situated in a different region. Each tribunal has two chambers with a career magistrate presiding. In addition, each chamber has two "judges for social matters." In cases involving social security for employees, one of these must be nominated by employer organizations and the other by union organizations. When a case involves the social security rights or obligations of a self-employed worker, the chamber is composed of two career magistrates and one "judge for social matters" nominated by the professional organizations of the self-employed. The labor appeals courts, of which there are five, are similarly organized.

Decisions of the labor tribunals may generally be appealed to the labor appeals courts. Cases involving employers' obligations, voluntary social security for Belgians abroad, cash work accident and occupational disease benefits, and cases involving conflicts between social security agencies may only be appealed if the total amount contested exceeds BF 3,500.

The Belgian Supreme Court may hear cases alleging violation of the law or due process. In addition, the prosecutor general of the Belgian Court of Appeals (not the labor appeals court) may bring cases before the Supreme Court alleging that governmental agencies have exceeded their authority.

VI. International Agreements

Belgium concluded its first social security agreement (dealing exclusively with work accident insurance) with Luxemburg in 1905. Since the Second World War it has concluded agreements with about two dozen countries, including the Social Security Regulations of the European Communities. Belgium's bilateral agreements generally guarantee equal treatment of nationals, eliminate dual coverage and contributions, and provide for totalization of social security credits and payment of pro rata benefit.

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98th Congress, 1st Session - - - - - - - House Document No. 98-78

WAIVING THE FISCAL YEAR 1983 CEILING ON TROOPS PERMANENTLY STATIONED IN EUROPEAN NATO COUNTRIES

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

A LETTER WAIVING THE FISCAL YEAR 1983 CEILING ON TROOPS PERMANENTLY STATIONED ASHORE IN EUROPEAN NATO COUNTRIES BY THE NUMBER OF PERSONNEL ASSOCIATED WITH THE PLANNED DEPLOYMENT OF GROUND-LAUNCHED CRUISE MISSILES TO EUROPE, PURSUANT TO SECTION 799A OF PUBLIC LAW 97-377

JUNE 28, 1983.—Referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11-012 O WASHINGTON : 1983

THE WHITE HOUSE,
Washington, June 23, 1983.

Hon. THOMAS P. O'NEILL, Jr.,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: Pursuant to the provisions of Section 799A of the Department of Defense Appropriation Act, 1983, I am waiving the fiscal year 1983 ceiling on troops permanently stationed ashore in European NATO countries by the number of personnel (1,380) associated with the planned deployment of Ground-Launched Cruise Missiles to Europe.

I am taking this action because, barring a successful agreement in Geneva, the Ground-Launched Cruise Missile program will be a critical U.S. defense-related objective in NATO for 1983. It is an essential aspect of NATO's dual-track approach involving intermediate-range nuclear force modernization and arms reductions. The overriding national security requirement necessitates a waiver of the provisions of Section 799A.

Sincerely,

RONALD REAGAN.

98th Congress, 1st Session - - - - - - - - - - House Document No. 98–79

IMPORT RELIEF ON SPECIALTY STEEL

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

A REPORT ON HIS DECISION TO GRANT IMPORT RELIEF TO THE SPECIALTY STEEL INDUSTRY, PURSUANT TO SECTION 203(b) OF PUBLIC LAW 93–618

JULY 11, 1983.—Referred to the Committee on Ways and Means and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11–011 O WASHINGTON : 1983

THE WHITE HOUSE,
Washington, July 5, 1983.

Hon. THOMAS P. O'NEILL, Jr.,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: In accordance with Section 203(b)(1) of the Trade Act of 1974, I am writing to inform you of my decision today to grant import relief to the specialty steel industry. My serious concerns last November about the health of the industry led me to direct the United States Trade Representative to ask the United States International Trade Commission to initiate this investigation. The USITC found specialty steel imports to be a substantial cause of serious injury to the industry. Imports have depressed U.S. prices and captured market share from U.S. producers. This has had the effect of reducing domestic production and capacity utilization, resulting in major losses by most producers. Employment has also fallen significantly.

The relief program I am implementing is tailored to the needs of the industry as well as the objective of trade liberalization as expressed at the Williamsburg summit. It is part of a comprehensive and coordinated approach to this industry's trade problems. In addition to applying import relief under Section 201, I have directed USTR to continue its efforts to achieve the multilateral elimination of trade barriers.

The relief to be implemented is a combination of tariffs and quotas:

(1) For the flat-rolled products which comprise 55 percent of U.S. imports, a four year digressive tariff will be applied in addition to other tariffs due. Beginning in year one, a 10 percent tariff will apply to stainless steel sheet and strip, declining uniformly until year four when the tariff will be 4 percent. With regard to plate, the duty will decline from 8 percent in the first year to 4 percent in the fourth year.

(2) Imports of stainless rod, bar, and tool steel will be subject to a global four years quota. This quota will be expanded at a rate of 3 percent annually, outpacing the historic annual growth of consumption of 1–2 percent. This relief will incorporate the USITC's proposed minimum quantities in year one. (For additional details see attached table.) I am prepared to negotiate orderly market agreements with willing countries on rod, bar, and tool steel.

My decision differs in some respects from the USITC proposal. I have recommended relief for four years instead of three to give the industry sufficient time to complete investment projects, improve productivity, and restore profitability. This relief package has been adopted in order to reflect the substantial differences in the competitive conditions of the various parts of the industry. Tariffs applied to the flat-rolled products will be at levels less restrictive than the relief suggested by the USITC. Producers of flat-rolled stainless steel are on the whole more efficient, progressive, and competitive than their counterparts in the non-flat rolled industry who have faced greater import competition. They have also recently succeeded in using our antidumping and countervailing duty statutes to obtain special duties on unfairly traded imports from three of their principal foreign competitors. These duties will be added to the normal tariff and the additional tariffs to be imposed under Section 203. Consequently, greater relief is needed for producers of non-flat-rolled products to enable them to make necessary investments.

In closing, I would like to state that I am implementing this relief package so as to achieve two complementary objectives:

(1) to provide help to a domestic industry seriously injured by imports, and

(2) to take steps to further our ultimate goal of trade liberalization.

I have instructed the USTR to form an interagency task force to pursue these dual objectives, and to report to me annually on progress toward them.

Sincerely,

RONALD REAGAN.

Schedule of Relief

Additional Tariffs (Percentage ad valorem)

Year	I	II	III	IV
Sheet & Strip	10	8	6	4
Plate	8	6	5	4

Quantitative Limit (Tons)

Year	I	II	III	IV
Bar	27,000	27,800	28,600	29,500
Rod	19,100	19,700	20,300	20,900
Alloy Tool Steel	22,400	23,100	23,800	24,500

98th Congress, 1st Session - - - - - - - - - - House Document No. 98-80

RESCISSION AND DEFERRALS

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

ONE PROPOSED RESCISSION OF BUDGET AUTHORITY, AND FOUR NEW DEFERRALS, PURSUANT TO SECTIONS 1012(a) AND 1013(c) OF PUBLIC LAW 93-344

JULY 11, 1983.—Message and accompanying papers referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11-011 O WASHINGTON : 1983

[illegible]

[illegible]

[illegible]

To the Congress of the United States:

In accordance with the Impoundment Control Act of 1974, I herewith report a proposal to rescind $15,000,000 in budget authority previously provided by the Congress. In addition, I am reporting four new deferrals of budget authority totaling $34,795,142.

The rescission proposal is for the Department of State's migration and refugee assistance account. The deferrals affect Energy Activities, the Department of Health and Human Services and the Board for International Broadcasting.

The details of the rescission proposal and deferral are contained in the attached reports.

RONALD REAGAN.

THE WHITE HOUSE, *July 7, 1983.*

CONTENTS OF SPECIAL MESSAGE
(in thousands of dollars)

Rescission #	Item	Budget Authority
	Department of State	
R83-21	Migration and Refugee Assistance..........	15,000
	Subtotal, rescission proposal..........	15,000

Deferral #	Item	Budget Authority
	Energy Activities	
	Energy programs	
D83-76	Energy Conservation......................	3,050
D83-77	Alternative Fuels Production............	13,000
	Department of Health and Human Services	
	Center for Disease Control	
D83-78	Preventive health services..............	15,560
	Other Independent Agencies	
D83-79	Board for International Broadcasting...	3,185
	Subtotal, deferrals......................	34,795
	Total, rescission proposal and deferrals	49,795

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SUMMARY OF SPECIAL MESSAGES
FOR FY 1983
(in thousands of dollars)

	Rescissions	Deferrals
Ninth special message		
New items......................................	15,000	34,795
Change to amounts previously submitted......	---	---
Effects of ninth special message............	15,000	34,795
Amounts previously submitted that were changed by this message....................	---	---
Total, rescissions and deferrals............	15,000	34,795
Amounts previously submitted that were not changed by this message....................	1,554,015 1/	13,508,432 2/
Total amount proposed to date in all special messages..........................	1,569,015 1/	13,543,227 3/

1/ This amount includes $23,400,000 in current budget authority for the rural telephone bank that is offset by a corresponding increase in permanent budget authority (R83-20).

2/ This amount has been adjusted downward by $5.5 million to correct a discrepancy in a previous special message.

3/ All amounts listed represent budget authority except for $15,944,000 of outlays only in one general revenue sharing deferral (D83-168).

Rescission Proposal No: R83-21

PROPOSED RESCISSION OF BUDGET AUTHORITY

Report Pursuant to Section 1012 of P.L. 93-344

Agency Department of State	New budget authority (P.L. 97-377) $ 395,000,00
Bureau Bureau for Refugee Programs	Other budgetary resources ---
Appropriation title & symbol Migration and Refugee Assistance, 1931143	Total budgetary resources 395,000,00
	Amount proposed for rescission $ 15,000,00
OMB identification code: 19-1143-0-1-151	Legal authority (in addition to sec. 1012): ☒ Antideficiency Act
Grant program ☐ Yes ☒ No	☐ Other
Type of account or fund: ☒ Annual ☐ Multiple-year (expiration date) ☐ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other

Justification: This appropriation provides for the resettlement of refugees in the United States and assistance to other countries for the care and relief of refugees abroad. In addition, assistance is provided to refugees immigrating to Israel. Lower than expected refugee flows to the United States and other countries from Southeast Asia and the Soviet Union result in savings of $15 million. Consistent with the Administration's goal to control government spending, these excess funds are proposed for rescission.

This proposal is made in accordance with the Antideficiency Act (31 U.S.C.1512) to effect savings resulting from changes in program requirements.

Estimated Effects: There are no programmatic effects resulting from this rescission proposal.

Outlay Effects: (in million of dollars)

1983 Outlay Estimate		Outlay Savings			
April Update	July Update	1983	1984	1985	1986
394.9	384.4	10.5	3.8	0.7	---

1/ This account was the subject of deferrals in FY 1982 (D82-241 and D82-242).

DEPARTMENT OF STATE

OTHER

Migration and Refugee Assistance

Of the funds provided for "Migration and Refugee Assistance" for fiscal year 1983 in P.L. 97-377, $15,000,000 are rescinded.

READEX FICHE

Deferral No: D83-76

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Energy Activites	New budget authority (P.L.97-394;98-8) $279,290,000 $150,000,000
Bureau Energy Programs	Other budgetary resources 135,277,747
Appropriation title & symbol Energy Conservation 89X0215 1/	Total budgetary resources 564,567,747
	Amount to be deferred: Part of year ______ Entire year 3,050,000
OMB identification code: 89-0215-0-1-272	Legal authority (in addition to sec. 1013): ☐ Antideficiency Act ☐ Other ______
Grant program ☒ Yes ☐ No	
Type of account or fund: ☐ Annual ☐ Multiple-year ______ (expiration date) ☒ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ______

Justification: The Energy Conservation Program funds research and development on long-term, high-risk, high-payoff energy conservation technologies. The program also provides State and local grants for energy conservation. This deferral action is taken for $2,500,000 in building conservation program funds in excess of mandated regulatory activities. An additional $550,000 is deferred to cover estimated termination costs associated with closing down the energy-related inventions program, including the severence pay and lump sum leave payments for personnel supporting the program.

Estimated Effects: This deferral has no programmatic impact since the activities for which these funds were initially appropriated are no longer being undertaken.

Outlay Effect: This deferral action will shift $3.0 million in outlays from FY 1983 to FY 1984.

1/ This account was the subject of deferrals in FY 1983 (D83-74 and D83-24) and FY 1982 (D82-106).

Deferral No: D83-77

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Department of Energy	New budget authority (P.L. ____) $ -0-
Bureau Energy Programs	Other budgetary resources 17,391,721
Appropriation title & symbol Alternative Fuels Production 89X5180	Total budgetary resources 17,391,721
	Amount to be deferred: Part of year ____ Entire year 13,000,000
OMB identification code: 89-5180-0-2-271	Legal authority *(in addition to sec. 1013)*: ☐ Antideficiency Act ☐ Other ____
Grant program ☐ Yes ☒ No	
Type of account or fund: ☐ Annual ☐ Multiple-year ____ *(expiration date)* ☒ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ____

Justification: The Alternative Fuels Production Program develops and produces alternative fuels. Its objective is to help reduce dependence on foreign supplies in part by using cooperative agreements with non-Federal entities to support commercial scale development of alternative fuel facilities. Some cooperative ventures have not proven to be economically viable, including the project reflected in this deferral. This $13,000,000 deferral is to be used as an offset to the Department of Energy's FY 1984 Fossil Energy budget request.

Estimated Effects: This deferral has no programmatic impact since the Department has already funded a large number of Alternative Fuels projects (through the use of Cooperative Agreements and Feasibility Studies) that support more commercially promising development ventures.

Outlay Effect: This deferral will shift $13.0 million in outlays from FY 1983 to FY 1984.

52-030 O—84——2 (Pt. 3) BLR

Deferral No: 083-78

DEFERRAL OF BUDGET AUTHORITY

Report Pursuant to Section 1013 of P.L. 93-344

Agency Department of Health and Human Services	**New budget authority** (P.L. 97-377; 98-8) $ 17,610,000
Bureau Centers for Disease Control	**Other budgetary resources** 13,281,584
Appropriation title & symbol Preventive Health Services 75X0943	Total budgetary resources 30,891,584
	Amount to be deferred: **Part of year** ______ **Entire year** 15,560,000
OMB identification code: 75-0943-0-1-550	**Legal authority** *(in addition to sec. 1013):* ☒ **Antideficiency Act**
Grant program ☐ **Yes** ☒ **No**	☐ **Other** ______
Type of account or fund: ☐ **Annual** ☐ **Multiple-year** ______ *(expiration date)* ☒ **No-year**	**Type of budget authority:** ☒ **Appropriation** ☐ **Contract authority** ☐ **Other** ______

Justification: Funds for the construction of a new high containment laboratory were requested in the FY 1984 President's Budget. To make an early commitment to this project, Congress appropriated the required $15,560,000 in FY 1983 under the Emergency Expenditures to Meet National Needs Act, 1983 (Public Law 98-8). The architectural and engineering contract for the design of the high containment virology laboratory is to be awarded soon, with a completion date during FY 1984. Because of the lengthy time period required for the design process, the earliest possible obligation date for the construction of the virology laboratory is the fourth quarter of FY 1984. Consequently, these construction funds are being deferred. This deferral action of the no-year funds is taken pursuant to the Antideficiency Act (31 U.S.C. 1512).

Estimated Effects: This deferral action will allow funds to be made available for obligation when construction begins.

Outlay Effect: This deferral has no effect on FY 1983 outlays because these funds could not be obligated if made available.

Deferral No: D83-79

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Board for International Broadcasting Bureau	New budget authority (P.L. 97-377) $ 90,300,000 Other budgetary resources --- Total budgetary resources 90,300,000 2/
Appropriation title & symbol Grants and Expenses 9531145 1/	Amount to be deferred: Part of year 3,185,142 Entire year
OMB identification code: 95-1145-0-1-154 Grant program ☐ Yes ☒ No	Legal authority *(in addition to sec. 1013)*: ☒ Antideficiency Act ☐ Other
Type of account or fund: ☒ Annual ☐ Multiple-year *(expiration date)* ☐ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other

Justification: The Board for International Broadcasting is authorized by the Board for International Broadcasting Act of 1973 (22 U.S.C. 2871-2877) to provide assistance to Radio Free Europe/Radio Liberty, Inc. (RFE/RL), a private nonprofit radio broadcasting organization. Section 8(b) of the Act states "The Director of the Office of Management and Budget shall place in reserve and inform the Congress of any amount appropriated under this section which, because of upward fluctuations in foreign currency exchange rates, is in excess of the amount necessary to maintain the budgeted level of operation for RFE/RL, Incorporated."

The Board, in accordance with regulations established jointly by the Board and the Office of Management and Budget, reported that as of the end of the second quarter of 1983 the net currency exchange gains totaled $3,185,142. Therefore, funds totaling $3,185,142 are deferred. These funds will be used to offset any currency exchange losses occurring later in the year. If no losses are experienced, the funds will be proposed for rescission. This deferral action is taken in accordance with the International Broadcasting Act of 1973, and the Antideficiency Act (31 U.S.C. 1512).

Estimated Effects: No programmatic effect results from this deferral since program levels of Radio Free Europe/Radio Liberty will be maintained in 1983.

Outlay Effect: If there are no exchange rate losses in the remainder of 1983 the reported exchange rate gains and resulting deferral will reduce outlays by $3.2 million while maintaining the current program level.

1/ This account was the subject of a similar deferral in FY 1982 (D82-248).
2/ In addition, $3,394,674 is not available pursuant to P.L. 94-350.

CONTENTS OF SPECIAL MESSAGE
(in thousands of dollars)

Rescission #	Item	Budget Authority
	Department of State	
R83-21	Migration and Refugee Assistance.........	15,000
	Subtotal, rescission proposal..........	15,000

Deferral #	Item	Budget Authority
	Energy Activities	
	Energy programs	
D83-76	Energy Conservation....................	3,050
D83-77	Alternative Fuels Production...........	13,000
	Department of Health and Human Services	
	Center for Disease Control	
D83-78	Preventive health services.............	15,560
	Other Independent Agencies	
D83-79	Board for International Broadcasting...	3,185
	Subtotal, deferrals....................	34,795
	Total, rescission proposal and deferrals	49,795

* * *

SUMMARY OF SPECIAL MESSAGES FOR FY 1983
(in thousands of dollars)

	Rescissions	Deferrals
Ninth special message		
New items..................................	15,000	34,795
Change to amounts previously submitted......	---	---
Effects of ninth special message............	15,000	34,795
Amounts previously submitted that were changed by this message....................	---	---
Total, rescissions and deferrals............	15,000	34,795
Amounts previously submitted that were not changed by this message....................	1,554,015 1/	13,508,432 2/
Total amount proposed to date in all special messages...........................	1,569,015 1/	13,543,227 3/

1/ This amount includes $23,400,000 in current budget authority for the rural telephone bank that is offset by a corresponding increase in permanent budget authority (R83-20).

2/ This amount has been adjusted downward by $5.5 million to correct a discrepancy in a previous special message.

3/ All amounts listed represent budget authority except for $15,944,000 of outlays only in one general revenue sharing deferral (D83-168).

Rescission Proposal No: R83-21

PROPOSED RESCISSION OF BUDGET AUTHORITY

Report Pursuant to Section 1012 of P.L. 93-344

Agency Department of State	New budget authority (P.L. 97-377) $ 395,000,00
Bureau Bureau for Refugee Programs	Other budgetary resources ---
Appropriation title & symbol Migration and Refugee Assistance, 1931143	Total budgetary resources 395,000,00
	Amount proposed for rescission $ 15,000,00
OMB identification code: 19-1143-0-1-151	Legal authority *(in addition to sec. 1012)*: ☒ Antideficiency Act
Grant program ☐ Yes ☒ No	☐ Other
Type of account or fund: ☒ Annual ☐ Multiple-year _____ *(expiration date)* ☐ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other

stification: This appropriation provides for the resettlement of refugees n the United States and assistance to other countries for the care and relief of refugees abroad. In addition, assistance is provided to refugees immigrating to Israel. Lower than expected refugee flows to the United States and other countries from Southeast Asia and the Soviet Union result in savings of $15 million. Consistent with the Administration's goal to control government spending, these excess funds are proposed for rescission.

This proposal is made in accordance with the Antideficiency Act (31 U.S.C.1512) to effect savings resulting from changes in program requirements.

Estimated Effects: There are no programmatic effects resulting from this rescission proposal.

Outlay Effects: (in million of dollars)

1983 Outlay Estimate		Outlay Savings			
April Update	July Update	1983	1984	1985	1986
394.9	384.4	10.5	3.8	0.7	---

/ This account was the subject of deferrals in FY 1982 (D82-241 and D82-242).

DEPARTMENT OF STATE

OTHER

Migration and Refugee Assistance

Of the funds provided for "Migration and Refugee Assistance" for fiscal year 1983 in P.L. 97-377, $15,000,000 are rescinded.

Deferral No: D83-76

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Energy Activites	New budget authority (P.L.97-394;98-8) 279,290,000 $150,000,000
Bureau Energy Programs	Other budgetary resources 135,277,747
Appropriation title & symbol Energy Conservation 89X0215 1/	Total budgetary resources 564,567,747
	Amount to be deferred: Part of year ______ Entire year 3,050,000
OMB identification code: 89-0215-0-1-272	Legal authority *(in addition to sec. 1013)*: ☐ Antideficiency Act
Grant program ☒ Yes ☐ No	☐ Other ______
Type of account or fund: ☐ Annual ☐ Multiple-year ______ *(expiration date)* ☒ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ______

Justification: The Energy Conservation Program funds research and development on long-term, high-risk, high-payoff energy conservation technologies. The program also provides State and local grants for energy conservation. This deferral action is taken for $2,500,000 in building conservation program funds in excess of mandated regulatory activities. An additional $550,000 is deferred to cover estimated termination costs associated with closing down the energy-related inventions program, including the severence pay and lump sum leave payments for personnel supporting the program.

Estimated Effects: This deferral has no programmatic impact since the activities for which these funds were initially appropriated are no longer being undertaken.

Outlay Effect: This deferral action will shift $3.0 million in outlays from FY 1983 to FY 1984.

1/ This account was the subject of deferrals in FY 1983 (D83-74 and D83-24) and FY 1982 (D82-106).

Deferral No: D83-77

DEFERRAL OF BUDGET AUTHORITY

Report Pursuant to Section 1013 of P.L. 93-344

Agency Department of Energy Bureau: Energy Programs	New budget authority (P.L. ________) $ -0- Other budgetary resources 17,391,721
Appropriation title & symbol Alternative Fuels Production 89X5180	Total budgetary resources 17,391,721 Amount to be deferred: Part of year ________ Entire year 13,000,000
OMB identification code: 89-5180-0-2-271 Grant program ☐ Yes ☒ No	Legal authority *(in addition to sec. 1013)*: ☐ Antideficiency Act ☐ Other ________
Type of account or fund: ☐ Annual ☐ Multiple-year ________ *(expiration date)* ☒ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ________

Justification: The Alternative Fuels Production Program develops and produces alternative fuels. Its objective is to help reduce dependence on foreign supplies in part by using cooperative agreements with non-Federal entities to support commercial scale development of alternative fuel facilities. Some cooperative ventures have not proven to be economically viable, including the project reflected in this deferral. This $13,000,000 deferral is to be used as an offset to the Department of Energy's FY 1984 Fossil Energy budget request.

Estimated Effects: This deferral has no programmatic impact since the Department has already funded a large number of Alternative Fuels projects (through the use of Cooperative Agreements and Feasibility Studies) that support more commercially promising development ventures.

Outlay Effect: This deferral will shift $13.0 million in outlays from FY 1983 to FY 1984.

Deferral No: 083-78

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Department of Health and Human Services

Bureau Centers for Disease Control

Appropriation title & symbol

Preventive Health Services

75X0943

OMB identification code:
75-0943-0-1-550

Grant program ☐ Yes ☒ No

Type of account or fund:
☐ Annual
☐ Multiple-year ______ *(expiration date)*
☒ No-year

New budget authority (P.L. 97-377; 98-8) $ 17,610,000
Other budgetary resources 13,281,584
Total budgetary resources 30,891,584

Amount to be deferred:
Part of year ______
Entire year 15,560,000

Legal authority *(in addition to sec. 1013)*:
☒ Antideficiency Act
☐ Other ______

Type of budget authority:
☒ Appropriation
☐ Contract authority
☐ Other ______

Justification: Funds for the construction of a new high containment laboratory were requested in the FY 1984 President's Budget. To make an early commitment to this project, Congress appropriated the required $15,560,000 in FY 1983 under the Emergency Expenditures to Meet National Needs Act, 1983 (Public Law 98-8). The architectural and engineering contract for the design of the high containment virology laboratory is to be awarded soon, with a completion date during FY 1984. Because of the lengthy time period required for the design process, the earliest possible obligation date for the construction of the virology laboratory is the fourth quarter of FY 1984. Consequently, these construction funds are being deferred. This deferral action of the no-year funds is taken pursuant to the Antideficiency Act (31 U.S.C. 1512).

Estimated Effects: This deferral action will allow funds to be made available for obligation when construction begins.

Outlay Effect: This deferral has no effect on FY 1983 outlays because these funds could not be obligated if made available.

Deferral No: D83-79

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Board for International Broadcasting	New budget authority (P.L. 97-377) $ 90,300,000
Bureau	Other budgetary resources ---
Appropriation title & symbol Grants and Expenses 9531145 1/	Total budgetary resources 90,300,000 2/
	Amount to be deferred: Part of year 3,185,142 Entire year ______
OMB identification code: 95-1145-0-1-154	Legal authority *(in addition to sec. 1013)*: ☒ Antideficiency Act
Grant program ☐ Yes ☒ No	☐ Other ______
Type of account or fund: ☒ Annual ☐ Multiple-year ______ *(expiration date)* ☐ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ______

Justification: The Board for International Broadcasting is authorized by the Board for International Broadcasting Act of 1973 (22 U.S.C. 2871-2877) to provide assistance to Radio Free Europe/Radio Liberty, Inc. (RFE/RL), a private nonprofit radio broadcasting organization. Section 8(b) of the Act states "The Director of the Office of Management and Budget shall place in reserve and inform the Congress of any amount appropriated under this section which, because of upward fluctuations in foreign currency exchange rates, is in excess of the amount necessary to maintain the budgeted level of operation for RFE/RL, Incorporated."

The Board, in accordance with regulations established jointly by the Board and the Office of Management and Budget, reported that as of the end of the second quarter of 1983 the net currency exchange gains totaled $3,185,142. Therefore, funds totaling $3,185,142 are deferred. These funds will be used to offset any currency exchange losses occurring later in the year. If no losses are experienced, the funds will be proposed for rescission. This deferral action is taken in accordance with the International Broadcasting Act of 1973, and the Antideficiency Act (31 U.S.C. 1512).

Estimated Effects: No programmatic effect results from this deferral since program levels of Radio Free Europe/Radio Liberty will be maintained in 1983.

Outlay Effect: If there are no exchange rate losses in the remainder of 1983 the reported exchange rate gains and resulting deferral will reduce outlays by $3.2 million while maintaining the current program level.

1/ This account was the subject of a similar deferral in FY 1982 (D82-248).
2/ In addition, $3,394,674 is not available pursuant to P.L. 94-350.

O

98th Congress, 1st Session - - - - - - - House Document No. 98-81

FAIR HOUSING AMENDMENTS ACT OF 1983

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

PROPOSED LEGISLATION TO AMEND TITLE VIII OF THE ACT COMMONLY REFERRED TO AS THE CIVIL RIGHTS ACT OF 1978 TO PROVIDE THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT AND THE ATTORNEY GENERAL WITH ADDITIONAL AUTHORITY TO ENFORCE RIGHTS TO FAIR HOUSING, AND FOR OTHER PURPOSES

JULY 12, 1983.—Message and accompanying papers referred to the Committee on the Judiciary and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11-011 O WASHINGTON : 1983

To the Congress of the United States:

I am transmitting herewith the "Fair Housing Amendments Act of 1983."

The Federal Fair Housing Act was enacted by the Congress 15 years ago. It stands as a bold promise that no person in the United States should be denied full freedom of choice in the selection of housing because of race, color, religion, sex, or national origin. Since its passage, however, a consensus has developed that the Fair Housing Act has delivered short of its promise because of a gap in its enforcement mechanism.

The principal means of redressing violations under the Act is resolution of complaints by the Secretary of Housing and Urban Development through informal methods of conference, conciliation, or persuasion. This informal process is the best and most effective procedure that can be devised for speedy and non-burdensome relief for individual victims of discrimination. It has worked well when it has been approached in good faith by all parties to the dispute. The Secretary achieves conciliation in roughly three-fourths of the cases in which a determination to resolve through conciliation is made, and the success rate of conciliation by State and local agencies to which complaints are referred is comparable. But as few as the cases may be where conciliation is unsuccessful, they are too many.

The gap in enforcement is the lack of a forceful back-up mechanism which provides an incentive to bring the parties to the conciliation table with serious intent to resolve the dispute then and there. When conciliation fails, the Secretary has no place else to go. In those few cases where good will is absent, the exclusive reliance upon voluntary resolution is, in the words of former Secretary Carla Hills, an "invitation to intransigence."

I referred to this widely acknowledged gap in the law in my recent State of the Union message when I said:

> Effective enforcement of our Nation's fair housing laws is . . . essential to ensuring equal opportunity. In the year ahead, we will work to strengthen enforcement of fair housing laws for all Americans.

The central objective of the proposed legislation which I am transmitting today is to supply the missing ingredient to effective enforcement. I propose that when conciliation fails, the Secretary may refer the complaint to the Attorney General with the recommendation that an action be commenced on behalf of the United States in Federal District Court. This expands the current jurisdiction of the Justice Department, now limited to cases of discriminatory patterns or practices, to include cases involving individual victims of discrimination. It thus places the leadership in enforcement where it belongs, with the Federal Government rather than with the individual victim. And in order to emphasize the clear public interest in the prevention of discriminatory housing practices as well as to add teeth to the enforcement arsenal, it authorizes the Attorney General to seek substantial civil penalties in addition to equitable relief. While the maximum penalties are severe—as they ought to be in cases of violation of the basic right to be free from illegal discrimination—the tribunal with power to impose these remedies is that one which has earned and enjoyed the confidence of the American people over our history for its impartiality, independence, and fairness.

I also propose several other important improvements to the enforcement process, including:

Authorization for the Attorney General to seek specific performance of a conciliation agreement.

Confirmation that a conciliation may contain an agreement to submit to binding arbitration.

Authorization of temporary equitable relief through the courts while conciliation attempts are proceeding.

Conforming the attorneys' fee award provisions to those of the Civil Rights Attorneys Fee Award Act.

Extension of the statute of limitations for private actions from 180 days to two years.

Removal of the ceiling on punitive damages obtainable in private enforcement actions.

The proposed legislation also will extend coverage of the Fair Housing Act to prohibit discrimination on the basis of handicap. The need to extend the protection of this statute to the handicapped is a subject on which a clear consensus of the Congress emerged during the unsuccessful attempt to adopt amendments in the 96th Congress.

Reform of the Fair Housing Act is a necessity that is acknowledged by all. I urge that the Congress give these legislative proposals its immediate attention so that early enactment may be achieved.

RONALD REAGAN.

THE WHITE HOUSE, *July 12, 1983.*

A BILL To amend title VIII of the Act commonly referred to as the Civil Rights Act of 1978 to provide the Secretary of Housing and Urban Development and the Attorney General with additional authority to enforce rights to fair housing, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Fair Housing Amendments Act of 1983".

SHORT TITLE FOR 1968 ACT

SEC. 2. The Act entitled "An Act to prescribe penalties for certain acts of violence or intimidation, and for other purposes" (Public Law 90-284, approved April 11, 1968) is amended by inserting immediately after the comma at the end of the enacting clause the following: "That this Act may be cited as the 'Civil Rights Act of 1968'.".

SEC. 3. Title VIII of the Act entitled "An Act to prescribe penalties for certain acts of violence or intimidation, and for other purposes" (Public Law 90-284, approved April 11, 1968) is amended by inserting immediately after the title's catchline the following new section:

SHORT TITLE

SEC. 800. This title may be referred to as the "Fair Housing Act".

DEFINITIONS

SEC. 4. Section 802 of the Act entitled "An Act to prescribe penalties for certain acts of violence or intimidation, and for other purposes" (Public Law 90-284, approved April 11, 1968) is amended—

(a) by striking out "or 806." in subsection (f) and inserting in lieu thereof "806, or 817."; and

(b) by adding at the end thereof the following new subsections:

"(h) 'Conciliation' means the resolution of issues raised by a complaint and its investigation, through informal negotiations involving the person aggrieved, the respondent and the Secretary (or a State or local agency to which a complaint is referred).

"(i) 'Conciliation agreement' means a written record, executed by the person aggrieved and the respondent and (except in the case of an agreement obtained by a State or local agency to which a complaint is referred) approved by the Secretary, setting out the terms under which the issues raised by a complaint and its investigation have been resolved.

"(j) 'Respondent' includes the person named in a complaint, or any other person identified in the course of investigation as a per-

son who participated in, or was responsible for, an alleged discriminatory housing practice.

"(k) 'Handicap' means, with respect to a person, (1) a physical or mental impairment which substantially limits one or more of such person's major life activities, (2) a record of having such an impairment, or (3) being regarded as having such an impairment; but such term does not include any current impairment that consists of alcoholism or drug abuse, or any other impairment that would be a direct threat to the property or the safety of others.".

DISCRIMINATION AGAINST THE HANDICAPPED

SEC. 5. Section 804 of such Act is amended—

(a) by adding the following after subsection (e):

"(f)(1) To refuse to sell or rent after the making of a bona fide offer, or to refuse to negotiate for the sale or rental of, a dwelling to any person because of a handicap of a prospective buyer or renter or of any person associated with such buyer or renter unless such handicap would prevent a prospective dwelling occupant from complying with such rules, policies, and practices as are permitted by paragraph (2) of this subsection.

"(2) To discriminate against any person in the terms, conditions, or privileges of sale or rental of a dwelling, or in the provisions of services or facilities in connection therewith, because of handicap. For purposes of this paragraph—

"(A) discrimination includes—

"(i) refusal to permit reasonable modifications of premises occupied, or to be occupied, by persons with a handicap which are necessary to afford such handicapped persons ready access to and use of premises, but in the case of a rental, no modification need be permitted unless the renter first agrees to restore the premises to the condition which existed before such modification, reasonable wear and tear excepted; and

"(ii) refusal to make reasonable accommodations in policies, practices, rules, services, or facilities when such accommodations are necessary to afford handicapped persons ready access to and use of dwellings; and

"(B) discrimination does not include—

"(i) refusal to make alterations in premises at the expense of sellers, landlords, owners, brokers, building managers, or persons acting on their behalf;

"(ii) refusal to modify generally applicable rules, policies, practices, services, or facilities where such modification would result in expense to sellers, landlords, owners, brokers, building managers, or persons acting on their behalf or unreasonable inconvenience to other affected persons; or

"(iii) refusal to allow architectural changes to, or modifications of, buildings which would decrease the marketability or value of a building or alter the manner in which a building or its environs, has been, or is intended to be, used.";

(b) by inserting "handicap", immediately after "sex," each place it appears in sections 805 and 806, and subsections (c), (d) and (e) of section 804 of such Act.

ENFORCEMENT BY THE GOVERNMENT

SEC. 6. Section 810 of such Act is amended—

(a) by striking out "Within thirty days after receiving a complaint, or within thirty days after the expiration of any period of reference under subsection (c), the" in subsection (a) and inserting in lieu thereof "The";

(b) by adding afer "person aggrieved" in the fourth sentence of subsection (a) the phrase "and to the respondent";

(c) by adding the following after the fourth sentence in subsection (a):

"The Secretary shall make and give notice of his decision whether to resolve the complaint as promptly as possible and, so far as practicable, not later than one hundred and twenty days after receiving the complaint or after expiration of any period of reference under subsection (c)."

(d) by adding the following at the end of subsection (a): "A conciliation agreement may provide for binding arbitration of the dispute arising from the complaint. Any arbitration that results from a conciliation agreement under this section may award appropriate specific relief, including monetary relief, to the person aggrieved."

(e) by adding the following after the third sentence in subsection (b):

"A person who is not named in a complaint, but who is identified in the course of investigation as a respondent, may be joined as an additional or substitute respondent by means of written notice from the Secretary. Such notice shall set out the procedural rights and obligations of respondents and shall explain the basis for the Secretary's belief that the person to whom the notice is addressed is properly joined as a respondent. The notice shall be accompanied by a copy of the original complaint."; and

(f) by striking out subsection (c) and inserting the following in lieu thereof:

"(c) Whenever a complaint alleges a discriminatory housing practice which appears to constitute a violation of a State or local fair housing law within the jurisdiction of a State or local public agency which has been certified by the Secretary under this subsection, the Secretary shall refer such complaint to such agency and, except as provided in this subsection, shall take no further action with respect to such complaint if the appropriate State or local agency has, within thirty days from the date of referral, commenced proceedings in the matter and, having done so, carries forward such proceedings with reasonable promptness. The Secretary shall take action as provided in subsection (a) on a complaint referred to a State or local agency on which a final disposition by such agency has not been obtained upon request by the complainant made at any time not less than ninety days following the date of referral, provided that the Secretary may continue such action from time to time so long as the Secretary believes, on the basis of consultation with the State or local agency, that the ongoing efforts of such agency are likely to result in satisfactory resolution of the complaint. The Secretary also may take further action at any time on a complaint referred to a State or local agency if the Secretary certifies that in his judgment, under the circumstances of the particular case, the protection of the rights of the parties or the interests of justice require such action. In making such certification with respect to a complaint on which a final disposition by a State or local agency has been obtained, the Secretary shall accord substantail weight to the findings and conclusions made by the State or local agency. In no event shall the Secretary take further action where the State or local agency has obtained a conciliation agreement. An agency may be certified under this paragraph if the Secretary determines that the substantive rights protected by such agency are substantially equivalent to such rights protected by this title (provided that an agency may be certified with respect to discriminatory housing practices based on race, color, religion, sex, or national origin notwithstanding that the agency does not provide substantially equivalent protection against discriminatory housing practices based on handicap) and that the authority of such agency to investigate and conciliate complaints is substantially equivalent to such authority granted to the Secretary by and under this title."

(g) by striking out subsection (d) and inserting in lieu thereof the following:

"(d) (1) Whenever a complaint is filed with the Secretary, or whenever the Secretary is taking further action on a complaint previously referred to a State or local fair housing agency pursuant to subsection (c) of this section, and the Secretary determines on the basis of a preliminary investigation that prompt judicial action is necessary to carry out the purposes of this title, the Secretary may refer the matter to the Attorney General with a recommendation that a civil action be filed on behalf of the United States for appropriate temporary or preliminary relief pending final disposition of the complaint by the Secretary. Any temporary restraining order or other order granting preliminary or temporary relief shall be issued in accordance with Rule 65 of the Federal Rules of Civil Procedure.

"(2) If within thirty days after notification to a respondent of the Secretary's decision to resolve a complaint, the Secretary has not secured an acceptable conciliation agreement, the Secretary may at any time thereafter refer the matter to the Attorney General with a recommendation that a civil action be filed on behalf of the United States. Nothing in this paragraph shall prevent the referral of a complaint to the Attorney General before the expiration of thirty days after notification of the Secretary's decision to resolve a complaint, if the Secretary certifies that conciliation of the complaint has been attempted and that additional efforts are considered unlikely to be successful.

"(3) The Secretary, in the Secretary's sole discretion, may refer any matter otherwise within the Secretary's jurisdiction under this title to the Attorney General with a recommendation that appropriate action be taken.

"(4) Whenever the Secretary has reasonable cause to believe that a respondent has failed to comply with a conciliation agreement approved by the Secretary, the Secretary may refer the matter to the Attorney General with a recommendation that a civil action be filed on behalf of the United States for the enforcement of the terms of the agreement in an appropriate district court. In any proceeding brought under this paragraph, the petition for enforcement shall include a true copy of the conciliation agreement, and the court's inquiry shall be limited to interpretation of the agreement's terms and to factual issues concerning the nature and extent of the respondent's alleged failure to comply with the agreement. Nothing in this paragraph shall prevent the court from setting aside or modifying any provision of a conciliation agreement upon a finding that the provision is unconscionable or in derogation of the Constitution or laws of the United States.

"(5) Actions may be brought under this section in any appropriate United States district court. If the court finds that the respondent has engaged or is about to engage in a discriminatory housing practice, the court may award such preventive relief, including a permanent or temporary injunction, restraining order, or other order, against the person or persons responsible for a violation of this title as is necessary to insure the full enjoyment of the rights granted by this title, and may assess a civil penalty against the respondent in an amount not exceeding $50,000, and for any subsequent violation by such respondent may assess a civil penalty in an amount not exceeding $100,000, to vindicate the public interest. The court may allow the prevailing party (other than the United States) a reasonable attorney's fee as part of the costs.

"(6) Actions brought under this section shall be commenced within eighteen months after the alleged discriminatory housing practice or failure to comply with a conciliation agreement occurred.".

ENFORCEMENT BY PRIVATE PERSONS

SEC. 7. Section 812 of such Act is amended—

(a) by striking out subsection (a) and inserting in lieu thereof the following:

"(a)(1) The rights granted by sections 803, 804, 805, 806, and 817, as well as the rights created by a conciliation agreement, may be enforced by civil actions in appropriate United States district courts without regard to the amount in controversy and in appropriate State or local courts of general jurisdiction. A civil action shall be commenced within two years after the alleged breach of the conciliation agreement or the alleged discriminatory housing practice occurred.

"(2) A civil action may be filed without regard to whether a complaint has been filed with the Secretary pursuant to section 810(a) and without regard to the status of any such complaint filed with the Secretary, but where the Secretary or a State or local agency has obtained a conciliatiion agreement, no action may be filed under this section by the person aggrieved except for the purpose of enforcing the terms of such an agreement.

"(3) The court may continue a civil action brought pursuant to paragraph (1) of this subsection from time to time before bringing it to trial if the court believes that the ongoing efforts of the Secretary or of a State or local agency to obtain conciliation are likely to result in satisfactory settlement of the discriminatory housing practice which forms the basis for the action in court.

"(4) Any sale, encumbrance, or rental consummated prior to the issuance of any court order issued under the authority of this title, and involving a bona fide purchaser, encumbrancer, or tenant without actual notice of the filing of a complaint or civil action under the provisions of this title shall not be affected."

(b) by striking out subsection (c) and inserting in lieu thereof the following:

"(c) The court may grant as relief, as it deems appropriate, actual damages, any permanent or temporary injunction, temporary restraining order, and other relief, including punitive damages, and may allow the prevailing party a reasonable attorney's fee as part of the costs.";

(c) by adding the following after subsection (c):

"(d) Upon timely application, the Attorney General may intervene in such civil action, if the Attorney General certifies that the case is of general public importance. Upon such intervention the Attorney General may obtain such equitable and declaratory relief as may be appropriate.".

ENFORCEMENT BY THE ATTORNEY GENERAL

SEC. 8. Section 813 of such Act is amended by striking out subsection (a) and inserting the following in lieu thereof:

"(a) Whenever the Attorney General has reasonable cause to believe that any person or group of persons is engaged in a pattern or practice of resistance to the full enjoyment of any of the rights granted by this title, or that any group of persons has been denied any of the rights granted by this title and such denial raises an issue of general public importance, the Attorney General may bring a civil action in an appropriate United States district court.

"(b) The Court may award such preventive relief, including a permanent or temporary injunction, restraining order, or other order against the person or persons responsible for a violation of this title as is necessary to insure the full enjoyment of the rights granted by this title. The court may assess a civil penalty against the respondent in an amount not exceeding $50,000, and for any subsequent violation by such respondent may assess a civil penalty in an amount not exceeding $100,000, to vindicate the public interest.".

TECHNICAL AND CONFORMING AMENDMENTS

SEC. 9. (a) Section 803 of such Act is amended—

(1) by striking out the words "EFFECTIVE DATES" in the caption and inserting in lieu thereof the word "APPLICABILITY";

(2) by striking out subsection (a) and inserting in lieu thereof the following:

"(a) The prohibitions against discrimination in the sale or rental of housing set forth in section 804 shall apply to all dwellings except as exempted by subsection (b) of this section and by section 807."; and

(3) by striking out "section 804 (other than subsection (c))" in the opening clause of subsection (b) and inserting in lieu thereof "subsections (a), (b), (d), or (f) of section 804."

(b) Section 804 of such Act is amended by striking out "As made applicable by section 803 and except" and inserting in lieu thereof "Except."

(c) Sections 805 and 806 of such Act are amended by striking out "After December 31, 1968, it" in each such section and by inserting in lieu thereof in each such section "It".

(d) Section 810(e) of such Act is amended by striking out the word "complainant" and inserting in lieu thereof "plaintiff".

(e) Section 810(f) of such Act is amended to read as follows:

"(f) Whenever, prior to the conclusion of conciliation efforts by the Secretary, an action filed pursuant to this section, section 812 or section 813 shall come to trial, the Secretary shall immediately terminate all efforts to resolve such complaint by informal methods.".

(f) Section 811(e) of such Act is amended to read as follows:

"(e) In case of contumacy or refusal to obey a subpoena or to answer an interrogatory, a petition for enforcement may be filed in the United States district court for the district in which the person to whom the subpoena or interrogatory was addressed resides, was served, or transacts business.".

(g) Section 811(f) is amended—

(1) by striking out the word "or" after the words "the subpena" and inserting in lieu thereof the phrase, "interrogatory or other"; and

(2) by striking out the phrase "his subpena" and inserting in lieu thereof "the Secretary's subponea, interrogatory".

(h) Section 814 of such Act is amended by striking out "812 or 813" and inserting in lieu thereof "810, 812 or 813".

(i) Section 817 of such Act is amended by striking out the last sentence.

CONFORMING AMENDMENT TO TITLE IX OF 1968 CIVIL RIGHTS ACT

SEC. 10. Section 901 of the Act entitled "An Act to prescribe penalties for certain acts of violence or intimidation, and for other purposes" (Public Law 90-284, approved April 11, 1968) is amended by inserting ", handicap (as defined in Section 802 of this Act), "immediately after "sex" each place it appears.

APPLICABILITY

SEC. 11. The amendments made by this Act shall be applicable to complaints pending before the Secretary, to complaints heretofore referred to State or local agencies pursuant to Section 810(c) of Public Law 90-284 and pending on the date of enactment of this Act, and to all complaints initiated, filed or referred thereafter, but nothing in this Act shall be construed to shorten the time for filing a civil action pursuant to this title with regard to any complaint filed with the Secretary, or referred to a State or local agency, prior to the effective date of this Act.

SECTION-BY-SECTION SUMMARY OF THE FAIR HOUSING AMENDMENTS ACT OF 1983

POPULAR NAMES

Section 1 provides that the Act may be cited as the "Fair Housing Amendments Act of 1983". Sections 2 and 3 are nonsubstantive amendments making official the popular names of the 1968 Act and Title VIII of that Act.

DEFINITIONS

Section 4 adds Section 817 of the existing law (prohibitions on harassment and intimidation of persons exercising fair housing rights) to the definition of discriminatory housing practice. This change would clarify that complaints may be made to HUD in intimidation cases, and that the strengthened enforcement powers proposed for the Justice Department could be employed in such cases. (Current law provides only for "appropriate civil action(s)" to enforce Section 817.)

Section 4 also provides definitions of "conciliation" and "conciliation agreement" in order to facilitate other amendments which increase the prominence of conciliation as a milestone in the enforcement process. Also added is a definition of "respondent", which includes both persons identified by the person aggrieved in the original complaint and others identified in the course of investigation as persons who participated in or who were responsible for the alleged illegal practice.

In addition, a definition of "handicap" is provided. The term is defined (with respect to a person) as (1) a physical or mental impairment which substantially limits one or more major life activities, (2) a record of having such an impairment, or (3) being regarded as having such an impairment. The term, however, does not include any current impairment that consists of alcoholism or drug abuse, or any other impairment that would be a direct threat to the property or safety of others.

DISCRIMINATION AGAINST THE HANDICAPPED

Section 5 adds handicapped persons as a new protected class under the Fair Housing Act. A new Section 804(f) prohibits refusals to sell or rent or refusals to negotiate for the sale or rental of dwellings because of the handicap of a buyer or renter or of any person associated with the buyer or renter. The amendment also prohibits discrimination in the terms, conditions or privileges of sale or rental, or in the provision of services or facilities in connection with a dwelling, because of handicap.

The amendment includes an outline describing the broad types of seller/renter conduct which will be considered discriminatory, and other actions which are not included in the definition of discrimination.

Discrimination includes refusal to permit reasonable modifications of premises for occupancy by persons with handicaps where those modifications are necessary for ready access and use, but in the case of rental dwellings, the renter must first agree to restore the premises, reasonable wear and tear excepted.

The refusal to make reasonable accommodations of policies, practices, rules, services or facilities connected with a sale or rental, when such accommodations are necessary to afford handicapped persons ready access and use, is also included in definition of discrimination.

It is not, however, considered discriminatory under the amendments to refuse to make alterations at the expense of the housing supplier, or to refuse to modify rules, policies, practices, services or facilities where the modification would result in expense to the housing supplier, or in unreasonable inconvenience to other affected persons. Refusal to allow architectural changes or other building modifications is not discriminatory under the amendments if the change or modification would decrease a building's marketability or value, or alter the manner in which a building or its environs has been or is intended to be used.

The amendment also adds "handicap" as a prohibited basis of discrimination under other provisions of the Act, including Sections 804(c) (advertising), (d) (misrepresentation of availability of units) and (e) (block busting), 805 (financing), 806 (provision of brokerage services), and 901 (criminal prohibition against intimidation).

ENFORCEMENT BY THE GOVERNMENT

Section 6 is one of the bill's key amendments. It would augment Section 810 of the present law by authorizing HUD to refer a complaint to the Attorney General with the recommendation that the Attorney General initiate a lawsuit for injunctive relief and civil penalties during or after HUD's investigation-conciliation process.

Section 810(a) of the Act currently requires that the Secretary investigate a complaint and give notice in writing to the aggrieved person whether he intends to resolve it within thirty days after receipt of the complaint or after expiration of a period of reference to a State or local fair housing agency. The thirty-day limitation is unrealistically short to permit adequate investigation of a complaint and an informed decision whether to attempt to resolve it by conciliation. Section 6(a) of the bill removes the thirty-day limitation, and Section 6(c) of the bill substitutes therefor a provision requiring the Secretary to make and give notice of his decision whether to resolve the complaint as promptly as possible and, so far as practicable, within

120 day after receiving the complaint or reactivating a complaint previously referred to a State or local agency. The provision is not intended to bar the Secretary from conducting further investigation after the determination to resolve and commencement of conciliation where considered necessary. The permission to defer the determination to resolve beyond 120 days where it is not practicable to do otherwise is intended to provide for unusual circumstances, such as where issuance and enforcement of subpoenas and interrogatories under Section 811 of the Act is required.

A new provision is added to Section 810(a) of the Act stating that a conciliation agreement may provide for binding arbitration of the dispute arising from the complaint. Any such arbitration may result in the award of appropriate specific relief, including monetary relief, to the person aggrieved. The specification of such authority of the arbitrator is not intended to question the appropriateness of current practice of providing for specific relief, including monetary relief, in conciliation agreements.

Section 6(e) of the bill contains an amendment to Section 810(b) permitting the Secretary to join additional respondents as parties to a complaint where such persons are identified, in the course of investigation, as appropriate additional or substitute respondents. The Secretary must provide written notice of this action to any such new respondent.

Section 810(c), regarding referral of complaints to State or local agencies administering laws providing substantially equivalent rights and remedies, is revised to assure that State and local laws which have been recognized under current law will not lose such status (and, as a consequence, their rights to reimbursement for expenses under Section 816 of the Act) as a result of the amendments. The fair housing laws of 30 States and 40 localities have been recognized to date. The amendment would confirm HUD's practice since 1972 by providing that, as to remedies, a State or local agency will be certified if the authority of such agency to investigate and conciliate complaints is substantially equivalent to such authority granted to the Secretary, notwithstanding that the State or local law fails to provide a complainant with a judicial remedy. Current regulations provide that the Secretary will recall referred complaints, pursuant to the recall authority granted by Section 810(b) of the Act, where the applicable State or local law fails to provide access to a State or local court and the complaint has not been satisfactorily resolved. Under current law, such recall by the Secretary recommences the statute of limitations for institution of private action by the complainant pursuant to Section 810(d). Following enactment of the amendments, recall of a previously referred complaint by the Secretary under such circumstances would permit the Secretary to pursue the enhanced enforcement procedures provided by the amendments. Thus, such enhanced procedures will be available as a back-up to State and local conciliation efforts as well as HUD conciliation.

The revisions to Section 810(c) reflect the position of investigation and conciliation as the key remedial procedure under the Act and the benefits of providing for the availability of this procedure at the most decentralized level where housing transactions occur and within the most ready access to complainants and respondents. The revisions also reflect, however, that the Fair Housing Act represents strong national civil rights policy for which Federal enforcement responsibility is important and not to be evaded or diluted. Accordingly, the amendment preserves the right of the Secretary under current law to reactivate a complaint referred to a State or local agency if the Secretary certifies that in his judgment, under the circumstances of the particular case, the protection of the rights of the parties or the interests of justice require such action. In the interests of according finality to informed dispositions of complaints by State and local agencies, the amendment provides that, in making the foregoing certification with respect to a complaint on which a final disposition by the State or local agency has been obtained, the Secretary is to accord substantial weight to the findings and conclusions made by the agency. The Secretary is barred from taking any further action where a conciliation agreement has been obtained.

In order to further assure the availability of enforcement of Federal rights to aggrieved persons, the amendment also provides that the complainant may obtain reactivation of a complaint by the Secretary where a final disposition has not been obtained within 90 days following referral to a State or local agency. However, the Secretary may defer active investigation of such a complaint so long as the Secretary believes, on the basis of consultation with the State or local agency, that the ongoing efforts of such agency are likely to result in satisfactory resolution of the complaint. It is intended that the term "final disposition" encompasses no cause determinations, conciliation agreements, enforceable consent orders, orders issued after hearing, and any other actions resulting in termination of the agency proceeding.

The amendment also provides that, as to substantive rights, an agency may be certified if the law it administers provides substantially equivalent protection against discriminatory housing practices based on race, color, religion, sex or national origin even if it does not provide such protection with respect to discrimination based on handicap. Current HUD regulations permit recognition of a State or local law as providing substantially equivalent rights notwithstanding that the statute does not prohibit acts of discrimination based on sex, which was added as a basis of prohibited discrimination under the Fair Housing Act in 1974. In fact, all State and local laws which have been recognized contain adequate prohibitions against discrimination based on sex. The proposed amendment reflects a determination that the exception of sex discrimination is no longer necessary and, further, that prohibitions against sex discrimination in housing are essential to an effective and comprehensive State or local fair housing law. However, not all State or local laws currently recognized contain prohibitions against discrimination based on handicap. The amendment is intended to make clear that complaints based on other prohibitions may be referred to a State or local agency even if the State or local fair housing law administered by it does not prohibit discrimination based on handicap.

The amendment is not intended to otherwise limit the Secretary's judgment and discretion in determining whether a particular State or local law is sufficiently comprehensive in its prohibitions to be an effective instrument in carrying out and achieving the intent and purposes of the Act.

Section 6 extensively amends Section 810(d), dividing that subsection into six paragraphs:

Paragraph (1) provides for authority in the Secretary to refer cases to the Attorney General during HUD's investigation stage where necessary for the purpose of seeking preliminary judicial relief pending final administrative disposition of a complaint. Any temporary restraining order or other order granting preliminary or temporary relief would be issued in accordance with Rule 65 of the Federal Rules of Civil Procedure.

Paragraph (2) provides basic authority for suits by the Attorney General on behalf of the United States where the Secretary, within thirty days after the notice of a decision to resolve, has not secured an acceptable conciliation agreement. If the Secretary wishes to refer the case to the Attorney General *before* the expiration of this thirty-day period, the Secretary must certify that conciliation has been attempted and that additional efforts are not likely to succeed.

Paragraph (3) authorizes the Secretary, in his or her sole discretion, to refer any case otherwise within the Secretary's jurisdiction for action by the Attorney General.

Paragraph (4) authorizes judicial enforcement by the Attorney General, upon referral from the Secretary, of conciliation agreements. The paragraph is explicit on the point that such an action should be in the nature of a suit to enforce a contract—*i.e.*, the court is not to look behind the agreement to examine the facts leading up to it. However, a special reservation allows the court reviewing an agreement to set it aside or modify it if any provision is "unconscionable or in derogation of the Constitution or laws of the United States".

Paragraph (5) authorizes U.S. District Courts, in actions brought by the Attorney General under Section 810, to assess up to $50,000 in civil penalties against any person or persons responsible for a violation of the Fair Housing Act. For any subsequent violation by the same respondent, a civil penalty may be assessed in an amount up to $100,000. The purpose of the civil penalties is "to vindicate the public interest." The court is also authorized to award preventive relief, including a permanent or temporary injunction, restraining order, or other order, and may allow the pevailing party (other than the United States) a reasonable attorney's fee as part of the costs.

Paragraph (6) provides for a statute of limitations on enforcement actions filed by the Attorney General under Section 810—eighteen months following the alleged discriminatory housing practice or violation of a conciliation agreement. (The statute of limitations for filing a complaint with the Secretary is 180 days following the alleged discriminatory housing practice.)

Because the basic thrust of an action by the Attorney General is to vindicate the public interest in assuring freedom from discrimination, the bill does not authorize intervention of right in the Attorney General's action by a private person aggrieved seeking redress for the violation. However, consolidation of private actions commenced under Section 812 with enforcement actions under Section 810 involving common questions of law and fact will be available under Rule 42 of the Federal Rules of Civil Procedure.

Under current law, Section 810(d) provides an independent basis for commencement of a private action by an aggrieved person following inability of the Secretary to obtain voluntary compliance. Such actions are subject to a special, short statute of limitations and may not be brought in Federal Court if the person aggrieved has a judicial remedy under a State or local law providing substantially equivalent rights and remedies. It also is uncertain, under current law, whether an aggrieved person who commences suit under Section 810(d) may obtain damages as well as equitable relief. In view of separate amendments to Section 812 which expand the statute of limitations for suits brought under that Section and permit such suits to be brought without regard to whether a complaint has been filed with the Secretary or the status of such a complaint, the amendment eliminates the separate basis for private action under Section 810(d) as unnecessary.

ENFORCEMENT BY PRIVATE PERSONS

Section 7 amends Section 812 (a) and (c) of the present law—the private litigation provisions.

Section 812(a) is amended to:

1. Extend the statute of limitations for private actions from 180 days to two years;
2. Clarify that a private action may be filed whether or not a complaint has been filed with the Secretary, and without regard to the status of such a complaint;
3. Make explicit the aggrieved person's separate cause of action to enforce the terms of a conciliation agreement;
4. Provide that where the Secretary or a state or local agency has obtained a conciliation agreement, no separate civil action may be filed by the person aggrieved under Title VIII except for the purpose of enforcing the terms of the agreement.

Other features of present Section 812(a) are retained without substantive change. Section 812(b) is also undisturbed.

Revised Section 812(c) authorizes the court to grant as relief, as it deems appropriate, actual damages, any permanent or temporary injunction, temporary restraining order, and other relief, including punitive damages. As under current law, "actual damages" recoverable as a result of a discriminatory housing practice are intended to include intangible damages, such as emotional distress and humiliation, as well as out-of-pocket costs. See *Jeanty* v. *McKay & Poague, Inc.*, 496 F.2d 1119 (1974); *Steele* v. *Title Realty Co.*, 478 F.2d 380 (10th Cir. 1973). The dollar limit on punitive damages is removed—leaving the amount of such damages to the discretion of the court—and the attorney's fee clause is adjusted to follow the format of the Civil Rights Attorney's Fee Awards Act, 42 U.S.C. 1988. (A comparable attorney's fee provision appears in amended Section 810(d).) Under current law, an attorney's fee may be awarded only to a prevailing plaintiff and only if the court finds that the plaintiff is financially unable to assume such fee.

A new Section 812(d) is added to the Act, providing that the Attorney General may intervene in any private civil action brought under Section 812, if the Attorney General certifies that the case is of general public importance. Upon such intervention, the Attorney General may obtain such equitable and declaratory relief as may be appropriate.

SPECIAL JURISDICTION OF THE ATTORNEY GENERAL

To augment the new litigation authority for the Attorney General contained in revised Section 810(d) of the Act, the bill provides in Section 8 for amendments to the Attorney General's existing enforcement powers contained in Section 813 of the present law. In addition to the existing authority of the United States to sue for injunctive relief, the court is empowered in an action brought under Section 813 to assess a civil penalty, "to vindicate the public interest," of up to $50,000 against a respondent found to have violated the statute and to assess a penalty of up to $100,000 for a subsequent violation by the same respondent.

TECHNICAL AND CONFORMING AMENDMENTS

Section 9 contains a series of technical and conforming amendments. They include confirmation of the authority of the Secretary to enforce an interrogatory, as well as a subpoena, under Section 811. Section 10 adds "handicap" as a protected class under Title IX of the Civil Rights Act of 1968, which imposes criminal penalties for intimidating or interfering with any person in the exercise of rights protected by the Fair Housing Act.

APPLICABILITY

Section 11 provides that the new enforcement powers set out in the bill shall be applicable to pending complaints, and provides that the bill's revised time requirements shall not be construed to shorten the time for filing a civil action with regard to complaints filed before the Amendments Act's effective date. This latter provision is necessary because, under court decisions, some complainants have been permitted to file suits very late where the Secretary's case-closing letter was received beyond the 180-day statutory filing period.

○

98th Congress, 1st Session - - - - House Document No. 98-82

SAVANNAH HARBOR (WIDENING), GEORGIA

COMMUNICATION

FROM

THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

TRANSMITTING

A LETTER FROM THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY, DATED DECEMBER 19, 1978, WITH ACCOMPANYING PAPERS AND ILLUSTRATIONS, ON SAVANNAH HARBOR (WIDENING), GEORGIA, IN RESPONSE TO A RESOLUTION OF THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES HOUSE OF REPRESENTATIVES ADOPTED JULY 10, 1968

JULY 12, 1983.—Referred to the Committee on Public Works and Transportation and ordered to be printed with illustrations

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U.S. GOVERNMENT PRINTING OFFICE
22–648 O WASHINGTON : 1983

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310

30 JUN 1983

Honorable Thomas P. O'Neill, Jr.
Speaker of the House of Representatives
Washington, D. C. 20515

Dear Mr. Speaker:

I am transmitting herewith a report dated December 19, 1978, from the Chief of Engineers, Department of the Army, on Savannah Harbor (Widening), Georgia, together with other pertinent reports. The report has been prepared in full response to a resolution adopted July 10, 1968, by the Committee on Public Works of the United States House of Representatives.

The views of the Governor of Georgia, the designated State agencies for Georgia and South Carolina, the Departments of the Interior and Commerce, and the Environmental Protection Agency, are set forth in the enclosed communications together with responses from the Chief of Engineers, as appropriate.

The Chief of Engineers concurs in the views and recommendations of the Board of Engineers for Rivers and Harbors that the navigation project at Savannah Harbor, Georgia, be modified to widen the existing navigation channel, subject to certain items of local cooperation. However, we note that the plan recommended in the report is estimated to cost about $1.8 million more, at 1976 price levels, than the plan which maximizes net economic benefits (NED plan) and produces no additional economic benefits. The additional cost is primarily for use of a dredged spoil material disposal site that would cause slightly less vegetation loss than would occur at an alternate site and that would reduce a local mosquito problem.

The Office of Management and Budget advises that, in general, this project meets the technical, programmatic, and budgetary standards set by this Administration for water resource development projects. Authorization of the project, however, would not be in accord with the program of the President in the absence of deep draft user fee legislation. A copy of the letter from the Office of Management and Budget is enclosed as part of the report.

Accordingly, I do not concur with a recommendation for other than the NED plan or for authorization of modification of the Savannah Harbor project at this time. The report is, therefore, provided for information only.

Sincerely,

W R Gianelli
William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Enclosure

COMMENTS OF THE OFFICE OF MANAGEMENT AND BUDGET

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

May 25, 1983

Honorable William R. Gianelli
Assistant Secretary of the Army
for Civil Works
Room 2E570 - The Pentagon
Washington, D. C. 20310

Dear Bill:

We have concluded our review of the Savannah Harbor Widening Project report, which you transmitted to us on February 4, 1982.

In general, this project meets the technical, programmatic, and budgetary standards set by this Administration for water resource development projects.

Authorization of the project, however, would not be in accord with the program of the President in the absence of deep draft user fee legislation.

Sincerely,

Frederick N. Khedouri
Associate Director
for Natural Resources,
Energy and Science

Office of Planning and Budget
Executive Department

James T. McIntyre, Jr.
Director

GEORGIA STATE CLEARINGHOUSE MEMORANDUM

TO: Lieutenant General J. W. Morris
Chief of Engineers
Department of the Army
Washington, D. C. 20314

FROM: Charles H. Badger, Administrator
Georgia State Clearinghouse
Office of Planning and Budget

DATE: February 13, 1978

SUBJECT: RESULTS OF STATE-LEVEL REVIEW

Applicant: Corps of Engineers

Project: EIS and Feasibility Report Widening of Savannah Harbor

State Clearinghouse Control Number: 77-09-12-01

The State-level review of the above-referenced document has been completed. As a result of the environmental review process, the activity this document was prepared for is recommended for further development with the following recommendations for strengthening the project:

All activities should be carried out so as not to violate applicable water quality standards or interfere with other legitimate water uses.

Dredging and spoil disposal should be performed in accordance with Water Quality Considerations for Construction and Dredging Operations, revised April, 1971, EPA, Region IV, Water Quality Office, Federal Facilities Branch.

Coordination with the Coastal Marshland Protection Section of the Department of Natural Resources should continue and sufficient monitoring data should be collected during dredging operations to document the effect on water quality.

Dredging operations should be curtailed during periods when dissolved oxygen D.O. in Savannah Harbor is between 3.0 mg/l and 3.5 mg/l and ceased when D.O. drops below 3.0 mg/l.

270 Washington St., S. W. · Atlanta, Georgia 30334

SC-EIS-4m
July 1975

, dredging should be conducted during the period from March 15 to June 1 of each year without prior approval of the Georgia Game and Fish Division.

The Corps of Engineers should continue cooperation and participation in studies to evaluate and develop improved dredge designs and methods.

The following State agencies have been offered the opportunity to review and comment on this project:

Department of Natural Resources
Office of Planning & Budget, Executive Department
Georgia Ports Authority

cc: Glenn Davis, OPB

COMMENTS OF THE STATE OF GEORGIA

Office of the Governor
Atlanta, Georgia 30334

George Busbee
GOVERNOR

Norman Underwood
EXECUTIVE SECRETARY

January 25, 1979

Lieutenant General J. W. Morris
Chief of Engineers
Department of the Army
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20314

Dear General Morris:

Thank you for your letter of December 19, 1978, notifying me of your recommendation to the Secretary of the Army for authorization of the Savannah Harbor Widening Project. As you know, the adequate maintenance and improvement of Savannah Harbor have been a high priority to Georgia for some time and I am very pleased to see that this project is progressing. I appreciate your recognition of the importance of this project not only for Georgia but for the nation as a whole. Our international trade is critically dependent on having adequate harbors and the Corps plays an instrumental role in ensuring that such facilities are provided.

I must admit I was somewhat surprised to receive your letter. It has been my understanding that this particular project faced no serious obstacles and had received approval all the way up the line. This impression was based on correspondence I received from you over a year ago (September, 1977) indicating that you were distributing the proposal for the required 90 day public review and comment. Following the review period, I wrote to you in February, 1978, indicating my strong support and encouraging prompt Congressional authorization. Having heard nothing since then, I assumed the project was moving along satisfactorily and I am perplexed that it has not even been forwarded to the Secretary. Now I am informed that this project will be subject to the President's June 6, 1978, water policy message to Congress which recommended a cost sharing policy for navigation projects such as this one. Since the President's proposal has not yet been acted upon by Congress, I am unclear as to its relevance to this project at this stage.

Furthermore as a member of the President's Water Policy Task Force, which met for the first time just a week before your letter was sent, I was under the impression that the Task Force was to be a primary vehicle for shaping the final legislation implementing the cost sharing element of the water policy. Your statement that "Application of this policy to the Savannah Harbor (Widening) Project requires (emphasis added) a contribution from the State of Georgia of an estimated $609,000 in cash..." would then seem somewhat premature. As you heard at the Task Force meeting, there was a very strong concensus that the group should continue only so long as its views were seriously considered and were reflected in the final water policy programs. It was my impression from talking with Secretary Andrus that it was his intention to use the Task Force in precisely that manner. Your letter could be construed in a manner which undermines the good faith efforts put forth by the Administration in setting up the Task Force.

As you are aware from attending the Water Task Force meeting last month, I am very much opposed to the inclusion of navigation projects in the cost sharing element of the President's policy. I see navigation as an issue separate and distinct from water quality, water supply, water conservation and all the other aspects of the proposed National Water Policy.

I also see a certain inconsistency in applying the concept of cost sharing particularly in defining vendible outputs. Ports and harbors are a tremendous revenue source for the federal government. Savannah Harbor alone had U.S. Customs collections of $100 million in 1978. Yet I do not hear any proposals to share these revenues with the states. Under the definitions proposed by Mr. Guy Martin in his draft legislation for cost sharing circulated among the Task Force members on December 26, 1978, I certainly would see customs collections as a vendible output of port improvement projects. If we are to share in the costs for navigational projects, then I believe we should share equitably in the revenues which accrue to the federal government as a result of their construction.

Regardless of how I feel about the National Water Policy, I believe it is premature for you to be incorporating up-front costs into authorizations at this time. The President's policy has not been enacted, endorsed or even debated in Congress. And, it is extremely unfair to place the financial burden of cost sharing on a few states at this time with the prospect that cost sharing may be modified or eliminated during Congressional review.

In any case, I would very much appreciate a clarification on the points of your letter which I discussed above. I want to avoid any misunderstandings as I proceed with my work on the Task Force.

Sincerely,

George Busbee

George Busbee

GB:jbr

LETTER TO THE STATE OF GEORGIA

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

REPLY TO
ATTENTION OF:
DAEN-CWP-A

19 December 1978

Honorable George Busbee
Governor of Georgia
State Capitol
Atlanta, Georgia 30334

Dear Governor Busbee:

I have today transmitted my final report to the Secretary of the Army on Savannah Harbor (Widening), Georgia. The purpose of this letter is to inform you of changes in the project cost sharing, brought about by the President's June 1978 water policy. These have occurred since you and your designated agency received my proposed report.

The Corps of Engineers coordinated the study with all known interested Federal and non-Federal agencies and individuals during the preparation of the feasibility report. Subsequent to review by the Board of Engineers for Rivers and Harbors and finalization of their report dated 29 June 1977, you received notification from the Corps dated 6 September 1977 that my proposed report was being distributed, together with other pertinent papers and a revised draft environmental impact statement to the states and agencies for the 90 day review and comment period. Your designated respresentative, Mr. Charles Badger, Administrator, Office of Planning and Budget, commented favorably by letter dated 13 February 1978. Your comments endorsing the project were also dated 13 February 1978.

Since that time, the President in his June 6, 1978 water policy message to Congress, proposed several changes in cost sharing for water resources projects to allow states to participate more actively in project implementation decisions. These changes include a cash contribution from benefiting states of 5% of construction (first) costs associated with nonvendible outputs and 10% of costs associated with vendible outputs.

Application of this policy to the Savannah Harbor (Widening) project requires a contribution from the State of Georgia of an estimated $609,000 in cash (5% of $12,180,000 total estimated project first cost based on October 1978 price levels). Other items of local cooperation would not be affected by this additional requirement. I am recommending authorization for the Savannah Harbor (Widening) project in accordance with the President's proposed cost-sharing policy.

Sincerely,

J. W. MORRIS
Lieutenant General, USA
Chief of Engineers

COMMENTS OF THE STATE OF SOUTH CAROLINA

State of South Carolina
Water Resources Commission

Clair P. Guess, Jr.
Executive Director

March 14, 1978

Lt. General John W. Morris
Chief of Engineers
Department of the Army
Washington, D.C. 20314

Dear General Morris:

The S.C. Water Resources Commission has been delegated as the State agency to submit final comment for projects located in South Carolina. The staff of the S.C. Water Resources Commission has received and reviewed the detailed project on Savannah River widening, June, 1974.

On February 1, 1978, the S.C. Water Resources Commission dispersed copies of the "Statement of Findings" to all pertinent State agencies for their review and comment. To date we have received one response(enclosure) and we shall interpret no response by the remaining State agencies to mean that the project will not significantly affect the environment.

The S.C. Water Resources Commission feels that this project will have minimal environmental effects as compared to the derived benefits. We again stress continued use of good construction practices (with on-site inspection) to minimize environmental disturbances which do occur in any large construction project of this nature.

The S.C. Water Resources Commission appreciates the late opportunity to comment on this important project and will forward any additional comments received from other State agencies.

With kind regards, I am

Sincerely yours,

Clair P Guess Jr.

Clair P. Guess, Jr.
Executive Director

CPGJr:rhv
Enclosure

South Carolina
Wildlife & Marine
Resources Department

James A. Timmerman, Jr., Ph.D.
Executive Director

March 6, 1978

Mr. Clair P. Guess, Jr.
Executive Director
S. C. Water Resources Commission
P. O. Box 4515
Columbia, S. C. 29240

Re: Feasibility Report for Harbor Widening -
Savannah Harbor, Georgia

Dear Mr. Guess:

Personnel from the South Carolina Wildlife and Marine Resources Department have reviewed the proposed project and evaluated its impact on fisheries habitat, water quality, recreation, and other factors related to the conservation of wildlife and fisheries resources.

It is our opinion that the proposed project will not substantially alter the quality of the environment and we, therefore, do not offer any objections to this work provided the applicant follows all construction plans as specified in the application.

Sincerely,

James A. Timmerman, Jr

James A. Timmerman, Jr.
Executive Director

JATjr/sa
cc: Bearden
F&WS

COMMENTS OF THE DEPARTMENT OF THE INTERIOR

United States Department of the Interior
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-77/877 1 December 1977

Lieutenant General J. W. Morris
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Morris:

Thank you for the letter of September 6, 1977, requesting our views and comments on the Chief of Engineers' Report and the revised draft environmental statement for Savannah Harbor, Chatham County, Georgia. We have reviewed the documents and conclude that they adequately consider those areas within our jurisdiction and expertise. Several brief comments follow:

Chief of Engineers' Report

We have no objection to the proposed plan for widening of part of the Savannah Harbor Ship Channel. We do, however, request that the Savannah District Engineer coordinate closely with the Jacksonville, Florida, Area Office of our Fish and Wildlife Service during the detailed planning and construction stages. The proposal to widen the channel comes in addition to several other Corps of Engineers' projects in Savannah Harbor in recent years. These projects, in conjunction with possible future works, could have a cumulative adverse impact on fish migration, wetlands, and the Savannah National Wildlife Refuge.

It is noted that the Chief of Engineers concurred with the recommendation of the Board of Engineers that post-authorization planning should take place to investigate realignment of the channel. (Presently, structures on the south side are not set back sufficiently and docked vessels extend into the existing channel creating a navigational hazard.) We see no need for channel realignment, once the channel widening is completed, since the work would take place by dredging on the north side of the present channel. The purpose of widening is to compensate for the narrow channel. Therefore, once the channel work is completed, this problem should be alleviated. Reasons for expanding the study should be further detailed in the final documents.

Revised Draft Environmental Statement

With the exception of the specific items discussed below, the revised draft environmental statement satisfactorily addresses our comments on the earlier draft statement.

Page 2, paragraph 1.04 - The geographic limits of reaches 1 through 5 should be delineated here and on plate 1.

Page 25, paragraph 4.13 - The Department, in a July 1, 1976, letter concerning the draft statement, commented on what it believes to be an inappropriate reference for predicting recovery and recolonization of benthic populations following channel enlargement; that is, Impact of Intracoastal Waterway Maintenance Dredging on a Mud Bottom Benthos Community, by Stickney and Perlmutter, 1975. Our opinion is based on the limited scope of the study, the variability of the data, site specificity, and other major differences in conditions between the Savannah Harbor site and the Stickney-Perlmutter study site. Furthermore, Stickney and Perlmutter were misquoted as stating that post dredging diversity values "...are higher than those observed before dredging occurs." The Environmental Protection Agency, in their July 23, 1976, comments on the draft statement, also expressed concern over the use of this reference. We note that this section in the revised draft statement remains unchanged from the original draft. The response to the Environmental Protection Agency's comment (page 37, paragraph 9.13) does not alleviate our objection to the use of the Stickney-Perlmutter study.

We therefore wish to reaffirm our opinion of the referenced study.

We hope these comments will be of assistance to you.

Sincerely,

Acting
Deputy Assistant SECRETARY

COMMENTS OF THE DEPARTMENT OF COMMERCE

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230
(202) 377-3111

November 23, 1977

Colonel James N. Ellis
Office of the Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear Colonel Ellis:

This is in reference to your revised draft environmental statement entitled, "Channel Widening for Navigation, Savannah Harbor, Georgia." The enclosed comment from the National Oceanic and Atmospheric Administration is forwarded for your consideration.

Thank you for giving us an opportunity to provide this comment, which we hope will be of assistance to you. We would appreciate receiving eight (8) copies of the final statement.

Sincerely,

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

Enclosure   Memo from: Gordon Lill
Deputy Director
National Ocean Survey

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

TO: William Aron
Director
Office of Ecology and Environmental Conservation

Gordon Lill

FROM: Gordon Lill
Deputy Director
National Ocean Survey

SUBJECT: DEIS #7709.15 - Channel Widening for Navigation
Savannah Harbor, Georgia

The subject statement has been reviewed within the areas of NOS responsibility and expertise, and in terms of the impact of the proposed action on NOS activities and projects.

The following comments are offered for your consideration.

On page 7, paragraph 2.15, data on hydrology agree with our tide table information with the exception of the 7.9 feet average at mile 21.3. This should be 7.0 feet.

Geodetic control survey monuments may be located in the proposed project area. If there is any planned activity which will disturb or destroy these monuments, NOS requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS monuments.

COMMENTS OF THE DEPARTMENT OF COMMERCE

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Policy
Washington, D.C. 20230

Lieutenant General J. W. Morris
Chief of Engineers
Department of the Army
Washington, D.C. 20314

Dear General Morris:

I am replying, at Secretary Kreps' request, with the Department of Commerce's comments on your proposed report and the other pertinent papers for the Savannah Harbor (Widening), Georgia.

Enclosed for your consideration are statements from the Maritime Administration and the National Ocean Survey of the National Oceanic and Atmospheric Administration.

Thank you for giving us the opportunity to make this review.

Sincerely,

Lucy A. Falcone
Deputy Assistant Secretary
for Policy Development
and Coordination

Enclosure

DEPARTMENT OF COMMERCE COMMENTS ON THE CORPS OF ENGINEERS PROPOSED REPORT ON SAVANNAH HARBOR (WIDENING), GEORGIA

Comments of the National Oceanic and Atmospheric Administration - National Ocean Survey

Geodetic control survey monuments may be located in the proposed project area. If there is any planned activity which will disturb or destroy these monuments, the National Ocean Survey (NOS) requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS monuments.

Comments of the Maritime Administration - Office of Port and Intermodal Development

We find the analysis and recommendations to be quite thorough with one exception which refers to future realizable annual benefits accruing from the improvement. The basis for calculation of these future annual benefits in the amount of $262,000 (page 84 and Table 12 of the report, page F-12 and Table F-6 of the Appendix) have not been set down with the definitiveness given the existing (1980) benefits of $670,000. Since the future benefits represent better than 25% of the total, they deserve adequate treatment.

COMMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30308

November 14, 1977
Lieutenant General J. W. Morris, USA
Chief of Engineers
Washington, D. C. 20314

Dear General Morris:

We have reviewed the revised Draft Environmental Impact Statement on the channel widening of Savannah Harbor. This Statement responded satisfactorily to our previous comments and, as such, we have rated it LO, lack of significant environmental objections, and 1, no further information is requested.

If we can be of further assistance, feel free to call on us.

Sincerely yours,

for John A. Little, Deputy
John C. White
Regional Administrator

SAVANNAH HARBOR (WIDENING) GEORGIA

REPORT OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

REPLY TO
ATTENTION OF:
DAEN-CWP-A

19 December 1978

SUBJECT: Savannah Harbor (Widening), Georgia

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on Savannah Harbor, Georgia. It is accompanied by the report of the Board of Engineers for Rivers and Harbors and the reports of the District and Division Engineers. These reports are in response to a resolution of the Committee on Public Works of the United States House of Representatives adopted 10 July 1968. This resolution requested a review of the report on Savannah Harbor to determine whether any modification of the existing project is advisable at the present time, with particular reference to improvement of the channel between the present upstream limit of the 500-foot channel and the Seaboard Coastline Railroad bridge.

2. The District and Division Engineers recommend modification of the existing project by widening the channel from 400 to 500 feet between the upstream limit of the existing 500-foot channel and Kings Island turning basin, a distance of 5.6 miles. The proposed modification would involve the dredging and disposal of about 3 million cubic yards of material. Based on July 1976 price levels, the construction cost is estimated at $10,345,000, of which $6,646,000 would be Federal, including $20,000 for navigation aids, and $3,699,000 would be non-Federal. Annual charges, based on an interest rate of 6-3/8 percent and a 50-year period for economic analysis, are estimated at $691,000. No increase in annual maintenance costs is expected. Annual benefits are estimated at $986,000, and the benefit-cost ratio is 1.4.

3. The Board of Engineers for Rivers and Harbors concurs generally in the findings of the reporting officers and recommends the improvements subject to certain items of local cooperation. The reporting officers have recommended that the work be accomplished in separable increments and that non-Federal cooperation be obtained accordingly. The Board believes that the proposed project is an integral unit and should not be undertaken in separable increments. The Board also believes that any work performed by non-Federal interests subsequent to project authorization may be accomplished under the provisions of Section 215 of the River and Harbor Act of 1968.

4. The Board notes that, in some cases, existing structures on the south side of the harbor are not set back a sufficient distance to preclude docked vessels from encroaching on the Federal channel. Therefore, the Board believes that consideration should be given during postauthorization planning to realigning the channel to assure sufficient setback distance on the south side.

5. Based on the use of October 1978 prices and the currently prescribed interest rate of 6-7/8 percent, the total cost is $12,189,000, of which $7,831,000 is Federal, the annual charges would increase to $869,000 and annual benefits would decrease to $979,000 resulting in a benefit-cost ratio of 1.1.

6. I concur generally in the views and recommendations of the Board, with the exception of cost sharing. The Board considered the project under criteria and guidance current before the President's 6 June 1978 water policy message to Congress.

7. The President proposed several changes in cost sharing for water resources projects to allow states to participate more actively in project implementation decisions. These changes include a cash contribution from benefiting states of 5% of construction (first) costs associated with nonvendible outputs and 10% of costs associated with vendible outputs.

8. Application of this policy to the Savannah Harbor (Widening) project requires a contribution from the State of Georgia of an estimated $609,000 in cash (5% of $12,189,000 total estimated project first cost based on October 1978 price levels). Other items of local cooperation would not be affected by this additional requirement. I recommend construction authorization for the Savannah Harbor (Widening) project in accordance with the President's proposed cost-sharing policy.

J. W. MORRIS
Lieutenant General, USA
Chief of Engineers

REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS

DEPARTMENT OF THE ARMY
BOARD OF ENGINEERS FOR RIVERS AND HARBORS
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060

REPLY TO
ATTENTION OF:

DAEN-BR 29 June 1977

SUBJECT: Savannah Harbor (Widening), Georgia

Chief of Engineers
Department of the Army
Washington, D.C.

1. Authority.--This report is in response to the following resolution adopted 10 July 1968:

> Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the report of the Chief of Engineers on Savannah Harbor, Georgia, printed in House Document Number 226, 89th Congress, 1st Session, and other pertinent reports with a view to determining whether any modification of the existing project is advisable at the present time, with particular reference to improvement of the channel between the present upstream limit of the 500-foot channel and the Seaboard Coastline Railroad Bridge.

2. Description.--The harbor is located on the southern Georgia coast in the Savannah River estuary. The harbor area includes the lower Savannah River which, along with certain of its tributaries, forms the boundary between South Carolina and Georgia. The mainland is separated from the ocean by several barrier islands and intervening salt marshes and tidal rivers. The center of activity in the harbor is adjacent to the city of Savannah. The mild climate of the area allows year-round navigation in the harbor.

3. Existing improvements.--Many improvements have been made at Savannah Harbor in the interest of commercial navigation. The existing Federal project includes 31 miles of channel across the ocean bar and in the Savannah River, with appurtenant turning basins. The bar channel is 40 feet deep and 600 feet wide. From the river mouth to the vicinity of Garden City, the channel is 38 feet deep, and varies

in width from 500 feet to 400 feet. A channel of lesser depth and width extends about 2.5 miles above Garden City. Facilities have also been constructed to reduce shoaling in the channel and to supply freshwater to the Savannah National Wildlife Refuge.

4. Tributary area and commerce. --The Port of Savannah has a 15-state tributary area extending from southeast Georgia northwesterly to the Canadian border. The primary area served includes the Savannah and Macon metropolitan areas and surrounding counties. This area had a population of about 900,000 in 1970.

5. The Port has experienced a steady growth of commerce for many years. In 1974, about 9,700,000 tons of commodities, more than twice the tonnage handled in the early 1960's, moved through the harbor. A reduction of commerce in 1975 to about 7,600,000 tons paralleled nationwide declines in foreign waterborne commerce for that year.

6. Problems and needs. --Increasing commerce and larger vessels have contributed to congestion in Savannah Harbor where most of the terminals and facilities are located. The channel width in this inner harbor area is less than the width of the seaward approach channels. There is a need to improve the channel to reduce vessel delays and enhance navigation safety.

7. Improvements desired. --At an initial public meeting on 25 July 1970, local interests expressed a desire for widening the Savannah River channel along the city front between Fig Island and Kings Island turning basins. At subsequent public meetings in March 1974 and May 1976, local interests reiterated their support for channel widening.

8. Improvements proposed. --The District Engineer finds that the existing project for Savannah Harbor should be modified by widening the channel from 400 to 500 feet between the upstream limit of the existing 500-foot channel and Kings Island turning basin, a distance of 5.6 miles. The proposed modification would involve the dredging and disposal of about 3 million cubic yards of material.

9. Economic evaluation. --The District Engineer estimates the first costs and annual charges for the recommended plan as shown below. Costs are based on July 1976 price levels. Annual charges reflect a 50-year period for economic analysis and an interest rate of 6-3/8 percent.

	Federal ($1,000)	Non-Federal ($1,000)	Total ($1,000)
First costs			
Dredging	6,475	166	6,641
Relocations	-	123	123
Lands and damages	-	2,894	2,894
Removal of improvements	151	-	151
Disposal areas	-	516	516
Aids to navigation	20	-	20
Total	6,646	3,699	10,345
Annual charges			
Interest and amortization	444	247	691
Maintenance	-	-	-
Total	444	247	691

10. Benefits are evaluated for reducing vessel transit time. Land enhancement resulting from placement of dredged material and redevelopment benefits have also been attributed to the proposed project. Average annual benefits and the benefit-cost ratio are shown below.

Items	Average Annual Benefits
Transportation savings	$932,000
Land enhancement	49,000
Redevelopment	5,000
Total	$986,000
Benefit-cost ratio	1.4

11. Project effects. --The proposed navigation improvements will beneficially affect marine commerce and permit safer marine transportation. The material dredged during widening will be a one-time source of landfill material of better quality than that which will be obtained during harbor maintenance dredging. Use of an area which is now poorly drained for disposal of dredged material will provide long-term environmental betterment through elimination of stagnant pools which are mosquito and rodent breeding habitat. At certain times, dredging operations will be halted to avoid harmful impacts upon anadromous

fish passing through the harbor. Possible short-term adverse environmental impacts would be associated with destruction of bottom habitat in the dredged area, and water quality impairment during dredging operations.

12. Recommendations of the reporting officers. --The District Engineer recommends that the existing project at Savannah Harbor, Georgia, be modified in accordance with his plan, subject to certain requirements of local cooperation. The Division Engineer concurs.

13. Public notice. --The Division Engineer issued a public notice stating the recommendations of the reporting officers and affording interested parties an opportunity to present additional information to the Board. Careful consideration has been given to the communications received.

Views and Recommendations of the Board of Engineers for Rivers and Harbors.

14. Views. --The Board of Engineers for Rivers and Harbors concurs in general in the views and recommendations of the reporting officers. The recommended improvements are economically justified and the requirements of local cooperation are generally appropriate. Non-Federal costs associated with those requirements are presently estimated to be $3,699,000.

15. The reporting officers have recommended that the work be accomplished in separable increments and that non-Federal cooperation be obtained accordingly. The Board believes that the proposed project is an integral unit and should not be undertaken in separable increments. The Board also believes that any work performed by non-Federal interests subsequent to project authorization may be accomplished under the provisions of Section 215 of the River and Harbor Act of 1968.

16. The Board notes that, in some cases, existing structures on the south side of the harbor are not set back a sufficient distance to preclude docked vessels from encroaching on the Federal channel. Therefore, the Board believes that consideration should be given during postauthorization planning to realigning the channel to assure sufficient setback distances on the south side.

17. The impacts of the proposed improvements were carefully considered including those discussed in the Revised Draft Environmental Impact Statement dated August 1976. The Board believes that the positive effects of the project outweigh the potential adverse impacts.

18. Recommendations.--Accordingly, the Board recommends that the existing project at Savannah Harbor, Georgia be modified generally in accordance with the plan of the District Engineer and with such modifications thereof as in the discretion of the Chief of Engineers may be advisable. The first cost to the United States for this modification is presently estimated at $6,626,000, exclusive of navigation aids. Additional operation and maintenance costs are not expected. This recommendation is made with the provision that, prior to commencement of construction, non-Federal interests will agree to:

a. Provide without cost to the United States all lands, easements, and rights-of-way necessary for the construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of dredged material, and including necessary retaining dikes, wasteweirs, bulkheads, and embankments therefor, or the costs of such retaining works;

b. Accomplish without cost to the United States all alterations and relocations of buildings, storm drains, utilities, and other structures and improvements made necessary by the construction;

c. Provide a cash contribution for the general navigation facilities equal to 50 percent of the final construction cost allocated to land enhancement resulting from landfill, exclusive of lands, easements, rights-of-way, alterations, and relocations;

d. Hold and save the United States free from damages due to the construction works, not including damages due to the fault or negligence of the United States or its contractors;

e. Provide and maintain without cost to the United States adequate public terminals and transfer facilities open to all on equal terms;

f. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the terminals commensurate with the depths maintained in the related project areas; and

g. Prohibit the erection of any structure within 125 feet of the bottom edge of the proposed channel widening.

19. Provided further that cost sharing be based on updated preconstruction cost allocations using data and estimates current at that time, and that required cash contributions be paid in a lump sum prior to the start of construction, or, as may be permitted by the Chief of Engineers, in installments prior to the start of pertinent project units or sections and in accordance with his construction schedules.

FOR THE BOARD:

Marshall

R. C. MARSHALL
Major General, USA
Chairman

REPORT OF THE DISTRICT ENGINEER

SYLLABUS

The purpose of this report is to develop a plan of improvement for Savannah Harbor to remove the navigation restraint imposed by the 400-foot navigation channel (in the reach between the Fig Island turning basin and the Kings Island turning basin) while addressing ways to enhance the National Economic Development (NED) and Environmental Quality (EQ). In formulating the selected plan of improvement for fulfilling these needs, the possible consequences of all reasonable alternatives were studied and evaluated according to their contributions, both beneficial and adverse, to the four accounts of Principles and Standards--National Economic Development (NED), Environmental Quality (EQ), Social Well-Being (SWB), and Regional Development (RD).

Historically, shipping has always been Savannah's most important industry, involving practically every segment of the business community. As such, it has been a vital factor in stimulating the industrial growth and economic progress of the Savannah area and the State in general. Accordingly, the business community recognizes the economic importance of the port, and the need to maintain the port's capability for handling the vessels that call at the port.

The new generation of container vessels, larger size bulk carriers, and larger tankers which have been currently calling at the port have put added pressure on the narrow 400-foot-wide inner harbor. Widening this particular reach of the harbor would provide increased vessel efficiency and result in lower transportation costs for shippers. Accordingly this would provide added incentive to present and potential shippers to fully utilize this modern port and its new handling, storage, and distribution facilities. Without this improvement, not only could growth of the area be impeded, but the economy of the area and the nation would suffer from the higher shipping costs.

Based on the use of criteria adopted in accordance with Principles and Standards and other related policies, and consideration of the needs of the local interests, it is concluded that the most practical and feasible plan for meeting these objectives consists of the recommended improvements: (a) Widening the section of the harbor's navigation channel between Figs Island turning basin and Kings Island turning basin from 400 to 500 feet on the northern side of the channel; and (b) utilizing three land disposal areas to dispose of the dredged material.

It is anticipated that widening the harbor would cause no appreciable increase in the amount of shoaling in Savannah Harbor. Savannah Harbor, for all practical purposes, is a closed system with an average annual sedimentation rate of approximately 8 million cubic yards, based on District records. Accordingly, the total Federal maintenance for the project would not increase. The recommended improvement for Savannah Harbor would meet the navigational needs of the shippers, enhance the NED, SWB, and RD accounts, and provide minimum adverse effects on the EQ account. Positive contributions to the EQ account would be obtained through the use of disposal Area C and the reduction of a mosquito problem and potential source of encephalitis.

The estimated total first costs, annual monetary benefits, annual charges, and benefit/cost ratio (based on an interest rate of 6-3/8%) for the various elements of the selected plan of improvement are shown as follow:

First costs	$10,345,000
Annual benefits	986,000
Annual charges	691,000
Benefit/cost ratio	1.43

It is therefore recommended that, subject to certain conditions of local cooperation, the foregoing plan of improvement be adopted as a modification to the existing Federal project for Savannah Harbor, at a presently estimated additional first cost to the United States of $6,646,000. The non-Federal costs would consist of all lands, relocations, disposal area dikes and waste weirs presently estimated to cost $3,699,000.

Following construction of the recommended project, the Federal Government would maintain project depths in the improved channel. Non-Federal interest would maintain all dredge disposal dikes and waste weirs. The dredged material during construction and maintenance operation would be placed in disposal areas approved by the Environmental Protection Agency.

SAVANNAH HARBOR
GEORGIA

Feasibility Report
For
Harbor Widening

THE STUDY AND REPORT

Cargo movements in Savannah Harbor have shown a general increase during the past decade with 1972, 1973 and 1974 being record years for the Port of Savannah in terms of tonnage handled. Approximately 8, 9, and 9.7 million tons of commerce moved through the port during these respective years.

To transport this increasing cargo economically, the average size of the various types of vessels which call at the Port of Savannah each year is increasing. Harbor pilots of these larger vessels find it increasingly difficult to enter and leave the port. The increase in vessel transit time in the inner harbor results not only from traffic congestion but also from harbor restrictions in the narrow river channel. Shipping operators and port officials are cognizant of the need to widen the harbor to reduce the vessels' inport operating costs and reduce the hazard associated with navigating these large vessels in the congested inner harbor navigation channel.

PURPOSE AND AUTHORITY

The Committee on Public Works of the House of Representatives, United States, at the request of local interests, adopted a resolution on 10 July 1968 authorizing a study to determine the advisability of widening the channel between the present limit of the 500-foot channel and the Seaboard Coast Line Railroad Bridge. Subsequently, by letter of January 1972, the District Engineer, at the request of the Savannah Port Authority, recommended an increase in the scope of the widening study to include that part of the navigation channel between the Seaboard Coast Line Railroad Bridge and Kings Island turning basin. This recommendation was approved by the Office of the Chief of Engineers (OCE) on 13 January 1972.

SCOPE OF THE STUDY

The studies presented in this report are limited to Savannah Harbor as defined within the scope of the study authorizations and shown on plate 1. Investigations were made of the immediate and future regional needs for extending the present upstream limits of the existing 500-foot-wide navigation channel from the vicinity of Fig Island turning basin to the Kings Island turning basin. In addition, investigations were made of the various plans capable of satisfying these needs and the accompanying economic, environmental, regional, and social considerations and related matters associated with the selection of the most feasible plan. Principles and Standards and other related policies were utilized as criteria for guidance in developing the plan which best responded to the problems and needs of the people of the area.

STUDY PARTICIPANTS AND COORDINATION

The District Engineer coordinated the study with the following Federal, State, and local agencies: U.S. Coast Guard, Environmental Protection Agency, U.S. Department of the Interior, Fish and Wildlife Service, National Park Service, National Marine Fisheries Service, U.S. Department of Housing and Urban Development, Georgia Department of Natural Resources, Georgia Department of Community Development, Georgia Ports Authority, Savannah Port Authority, and Chatham County Commissioners. An initial public meeting was held on 25 July 1970. A formulation stage meeting was held on 13 March 1974 to present the District Engineer's preliminary findings concerning the studies, including the advantages and disadvantages of the various alternatives, and to obtain the views and desires of local interests and individuals concerning these alternatives. These inputs were considered in formulating a sound detailed plan which meets local interests' desires and needs within the scope of this study. Finally, a late stage public meeting was held in May 1976 to present the plan to local interests and to obtain their comments.

THE REPORT

The findings of the study have been arranged in three parts: a main report and two appendices. The main report is a brief nontechnical presentation, with recommendations, concerning the need for and advisability of widening the harbor. Appendix 1 is a detailed technical report following the same general outline as the main report. Appendix 2 includes the comments and views of Federal, State, and local agencies which have expressed an interest in the study.

PRIOR STUDIES AND REPORTS

The Corps of Engineers has made a number of studies in the past concerning the need for navigation improvements in Savannah Harbor. Some of the reports developed from these studies recommended projects which were subsequently authorized by Congress. These documents formed the basis of the present authorized improvements for the Federal Savannah Harbor project. For a summary of these documents, see table A-1 of Appendix 1.

RESOURCES AND ECONOMY OF THE STUDY AREA

The general economy of the Savannah area has been closely associated throughout its history with the shipping activities of the Savannah port. A general understanding of the resources, development, and economy of the Savannah area is essential in identifying problems and needs associated with Savannah Harbor and in evaluating appropriate alternative solutions.

ENVIRONMENTAL SETTING AND NATURAL RESOURCES

Savannah is one of the oldest Atlantic seaports. The port is open to year-round navigation because of a mild climate. Delays to shipping because of fog or other inclement weather are relatively infrequent. Savannah is appreciably nearer Far Eastern and South American ports than all North Atlantic ports and is closer to the eastern ports of South America than are Gulf of Mexico ports.

The City of Savannah is located on a bluff overlooking the Savannah River, in the eastern section of the State. It is approximately 83 miles southwest of Charleston, South Carolina, and 123 miles north of Jacksonville, Florida. The entrance to the Savannah River and the harbor is located just north of Tybee Island, about 18 miles east of the city. The harbor comprises the lower 21.31 miles of the Savannah River, which with certain of its tributaries constitutes the boundary between South Carolina and Georgia. A channel 10.8 miles in length is maintained from the mouth of the harbor across the bar to the Atlantic Ocean.

The mainland of Chatham County, including Savannah, is seperated from the Atlantic Ocean by several barrier islands and intervening salt marsh and tidal rivers. Much of the mainland south of the Savannah River and west of the marshes is devoted to the urban development associated with Savannah. Urban and industrial development extends westward of Savannah, gradually giving way to the natural woodlands in the western part of the county. North of Savannah, in South Carolina, lies the Savannah National Wildlife Refuge. Land in this area is maintained in a nearly natural state.

The area has a temperate climate, with a seasonal mean temperature of 51° F. in winter, 64° F. in spring, 80° F. in summer, and 66° F. in autumn. The growing season averages 273 days from an average date of last freeze on 26 February to a first freeze in autumn on 26 November. The lowest recorded temperature for the area is 8° F. and the highest is 105° F. Summer temperatures are moderated frequently by afternoon thunderstorm activity. Of the normal 48.91 inches of rain, about half falls in the thunderstorm season of 15 June through 15 September. The remainder, produced principally by squall-line and frontal showers, is spread over the other 9 months with a minor peak in March. Snow is a rarity and does not occur even on an average of once a year. Severe tropical storms affect this area about once in 10 years.

In addition to the Atlantic Ocean, the study area adjoins the Intracoastal Waterway (traversing the eastern portion of Chatham County with a project depth of 12 feet and width of 90 feet in land cuts and 150 feet in open water) and the Savannah River Below Augusta, Georgia, authorized navigation project (consisting of a navigation channel 9 feet deep and 90 feet wide from river mile approximately 202.6 in the vicinity of Augusta, Ga., to the upper end of Savannah Harbor at river mile 21.31).

Within the City of Savannah an area bordered by East Broad Street, Gwinnett Street, West Broad Street, and the Savannah River has been designated as the Savannah Historic District in the "National Register of Historic Places." The district contains many beautiful churches, old public buildings, and lovely parks. Located approximately 3 miles east of Savannah on the south bank of the Savannah River is Fort Jackson, an important historical monument. In 1965, Fort Jackson was presented to the Georgia Historical Commission, which restored the fort for use as a museum of the maritime history of Georgia.

Fort Pulaski, an important Civil War monument, is located 17 miles east of Savannah on Cockspur Island. Constructed in the early 19th century (1829-1847), this facility served as a major Civil War fortification along the Georgia coast until its capture in 1862 by Federal troops. A Civil War relic, the sunken C.S.S. GEORGIA, a Confederate ram, is located at river mile 11 where the river divides into Front and Back Rivers. Efforts are being made by non-Federal interests to find an adequate source of funds for salvage of the ram.

Located on lands adjacent to the harbor are the remains of several Indian campsites and burial grounds. These sites have been studied by the Institute of Archeology and Anthropology, University of South Carolina, but were not selected for further investigations.

The Savannah area is rich in natural resources associated with a coastal environment. The Savannah River and harbor area may well be considered one of the most significant natural resources of Georgia. The adjacent marshlands support an abundance of marine life while the barrier islands support numerous species of animals and birds.

Each spring and fall the main Savannah River, Back River, Middle River, and the numerous interconnecting tidal streams are hosts to two anadromous species of commercial and sport fishes; namely, shad and striped bass. Striped bass move up the Savannah River during the spawning season, beginning in March and continuing through May. The fish remain upstream until late July, then descend the river. Striped bass again appear in the estuary in late fall and remain until the following spring.

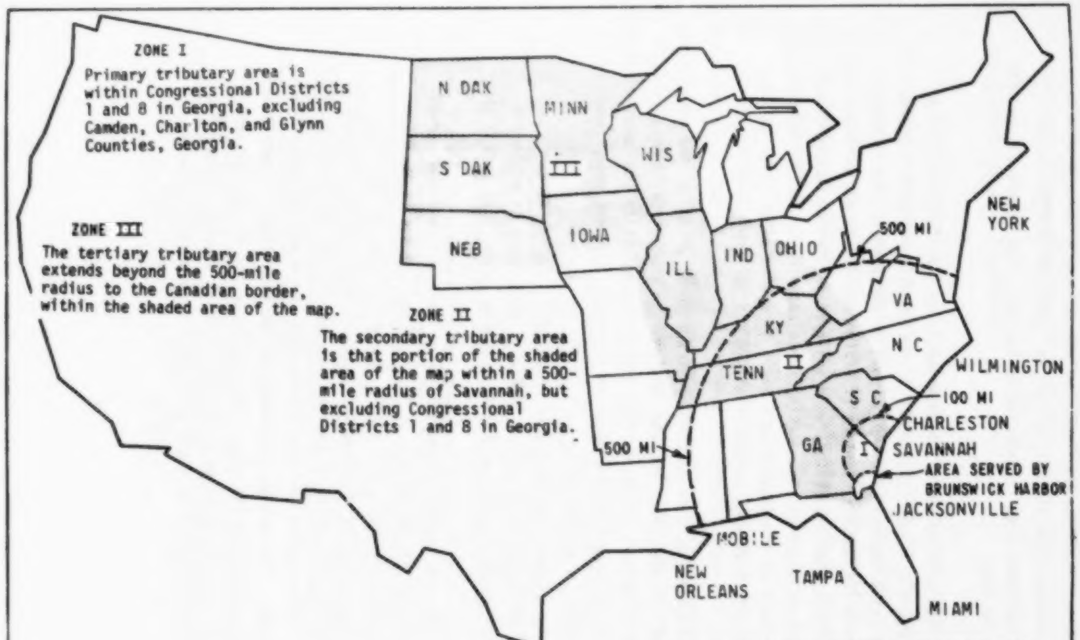
In 1931, the U.S. Fish and Wildlife Service established the Savannah National Wildlife Refuge, encompassing 13,000 acres of once-cultivated lowlands and marshes along the northern bank of the Savannah River in the upper three miles or so of the harbor area. The refuge is located within the Atlantic flyway and is an important nesting area for the wood duck. Since its establishment, approximately 3,000 acres of old ricefields and several impoundments have been developed to provide suitable resting and feeding areas for the thousands of waterfowl that winter in the South each year. The refuge also provides excellent habitat for many species of reptiles, amphibians, and mammals.

Other notable resources in the area include the forests to the north and west and the freshwater supply available through both the Savannah River and an excellent underground aquifer. Resources that enhance recreational opportunities in the area center mainly on the ocean beaches of the barrier islands.

HUMAN RESOURCES

The Port of Savannah serves a 15-State area extending from southeast Georgia in a northwesterly direction to the Canadian border (see figure 1). The 15 States include North Dakota, South Dakota, Nebraska, Minnesota, Ohio, Iowa, Wisconsin, Virginia, Illinois, Indiana, Kentucky, Tennessee, North Carolina, South Carolina, and Georgia. The 15-State tributary area is divided into three parts for purposes of this report. The primary area is considered to be southeastern Georgia, excluding Camden, Charlton, and Glynn Counties which are served more directly by the Port of Brunswick. The secondary area is that part of the 15-State tributary area within 500 miles of Savannah. The tertiary area contains the rest of the tributary area.

Historical population in the total tributary area grew from 33.5 million in 1950 to 40.7 million in 1970, or at a growth rate of 1.09 percent per year. U.S. population grew at an average annual rate of 1.50 percent for the same time period. However, population within the primary and secondary areas grew at a 3.5 percent combined growth rate from 1950 to 1970; and these areas account for most of Savannah Harbor commerce. Population is projected to grow to 66.4 million for the total



ZONE I

Primary tributary area is within Congressional Districts 1 and 8 in Georgia, excluding Camden, Charlton, and Glynn Counties, Georgia.

ZONE III

The tertiary tributary area extends beyond the 500-mile radius to the Canadian border, within the shaded area of the map.

ZONE II

The secondary tributary area is that portion of the shaded area of the map within a 500-mile radius of Savannah, but excluding Congressional Districts 1 and 8 in Georgia.

PORT OF SAVANNAH TRADE TERRITORY FOR EXPORT AND IMPORT TRAFFIC

SOURCE: GEORGIA PORTS AUTHORITY

FIGURE 1

tributary area by 2030. The population of the primary tributary area is expected to increase from 910,063 in 1970 to 1,207,700 in 2030, while that for the secondary area is expected to increase from 12,402,411 in 1970 to 20,824,200 in 2030.

The civilian work force for Chatham County in 1973 was 81,500. For the State of Georgia it was 2,127,800. A considerable number of persons traveled to distant counties for the purpose of employment. For example, many people from the Georgia counties of Effingham, Bryan, and Bulloch, and from Jasper County, South Carolina, were employed in Chatham County during 1970. In terms of location, the working force appeared to be very mobile. Less than one-half of the population 5 years of age or older lived in the same house in 1970 that they occupied in 1965.

Data on employed workers in 1970 by occupational group for the primary tributary area are available from the 1974 Georgia Statistical Abstract. The largest group of workers in the primary area by trade was in the service industry with 76,815 or 25 percent of the total of 301,443. The next group consists of those employed in manufacturing with 72,435 or 24 percent. Third was wholesale, retail trade with 55,472 or 18 percent. These represent nearly 70 percent of the total work force. The total work force is projected to increase to 496,600 in 2030 with little change in the rank listed above.

During 1970, per capita income for the primary and secondary trade areas was approximately 88 percent of the national average of $3,466 (expressed in 1967 dollars). Per capita income relative to the U.S. average was 92 percent for the Savannah Standard Metropolitan Statistical Area (SMSA) during 1970 while it was only 83 percent for the Augusta SMSA. However, per capita income for the Atlanta SMSA was 9 percent above the national average. This can be attributed to the high level of manufacturing employment in the Atlanta area. Per capita income in the tertiary tributary area appeared to be equal to the national average. Projected per capita income relative to the U.S. average is expected to increase within the total tributary area, especially in the primary and secondary area where it is presently low.

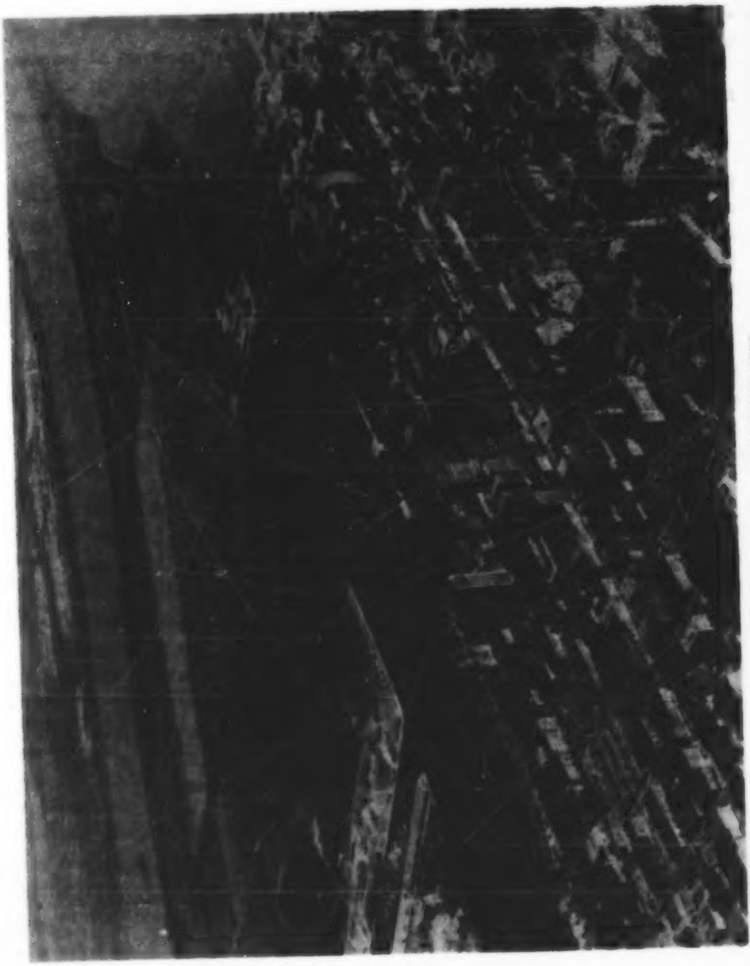
DEVELOPMENT AND ECONOMY

The Port of Savannah plays a vital role in stimulating industrial growth and economic progress of the Savannah area and the State of Georgia. Job opportunities in port-related industries, access to sources of raw material via economical water transportation, and transportation for finished products have played a vital role in the growth of the economy of the Savannah area.

Transportation facilities serving the Port of Savannah are excellent and consist of Federal and State highways, railroads, ocean and inland waterways, and airports. Numerous motor carriers provide transportation service to and from Savannah along with four railroads and two major airlines.

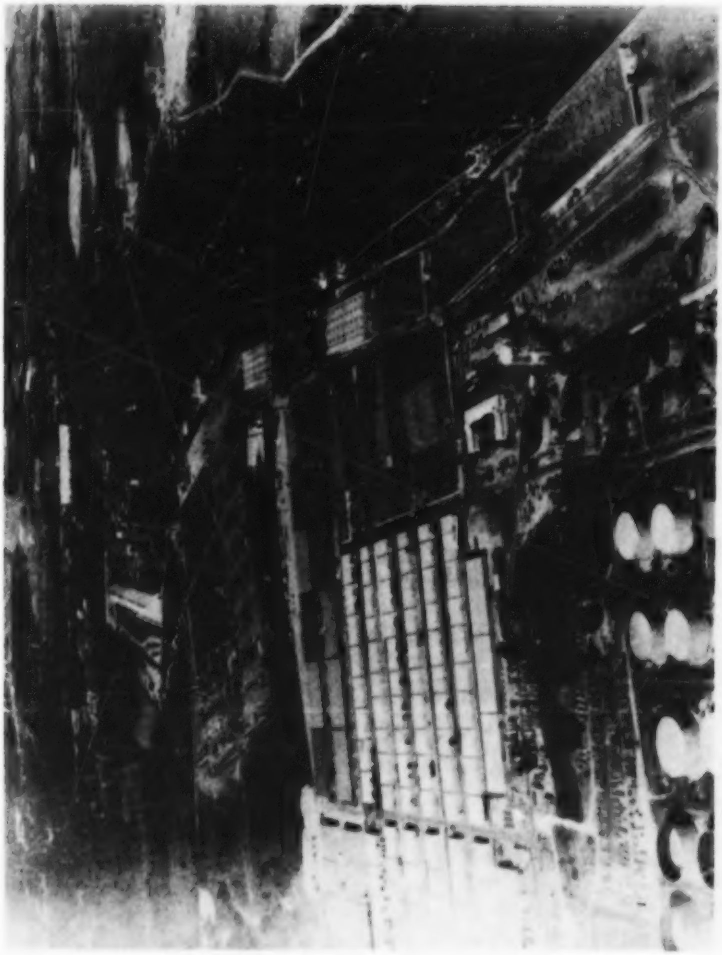
The port facilities at Savannah provide means for the transshipment, storage, manufacture, and processing of commodities bound for consumer markets. There are three major terminals at the port in addition to the numerous private docks. The three terminals are the Garden City and Ocean Terminals of the Georgia Ports Authority (GPA) and the East Coast Terminal. Some of the facilities that GPA has developed to expedite the handling and storage of cargo include the dry bulk terminal, the container facility for handling containerized shipments, the LASH (Lighter Aboard Ship) Terminal near the mouth of the Savannah River, and the associated transit storage sheds and wharf areas. These facilities are only a part of those located in the harbor; however, the other facilities are generally associated with private companies.

Continued growth of the harbor can be seen all along the harbor. GPA has plans for additional container facilities and private industry is



SAVANNAH HARBOR - CITY FRONT AREA

BRISK SHIPPING ACTIVITY, SAVANNAH STATE DOCKS OCEAN TERMINAL



GARDEN CITY TERMINALS

KINGS ISLAND TURNING BASIN
OPPOSITE GEORGIA PORTS AUTHORITY'S CONTAINER CENTRAL TERMINAL

heavily engaged in port development. Southern Energy's Liquefied Natural Gas (LNG) regasification facility is under construction on Elba Island. This facility is expected to handle about 3 million short tons of LNG per year. An oil company has announced its intention to develop an oil refinery in the harbor area, and a shipbuilding company has announced its intention to locate in the port area.

Historical tonnages for Savannah Harbor were obtained from Waterborne Commerce Statistics, published annually by the Corps of Engineers. Annual tonnages handled by the port are shown in table 1 for 1962-1975. This table shows a general increase in total tonnage handled by the ports facilities. It also shows the significance of foreign trade on the port's activities.

TABLE 1
SAVANNAH HARBOR
TOTAL TONNAGES, 1962-1975

Year	Import	Export	Domestic tonnage	Total tonnage
1962	1,996,517	587,832	1,974,062	4,458,411
1963	1,917,640	611,614	1,581,532	4,110,786
1964	1,939,319	771,954	1,446,264	4,157,537
1965	2,078,037	688,229	1,686,016	4,452,282
1966	2,088,654	799,734	1,868,275	4,756,663
1967	1,863,630	884,303	2,032,709	4,780,642
1968	2,316,927	1,147,308	2,561,222	6,025.457
1969	2,229,164	1,036,896	2,534,467	5,800,527
1970	2,736,471	1,398,183	2,676,116	6,810,770
1971	3,157,786	1,301,613	2,772,545	7,231,944
1972	3,650,220	1,376,680	3,010,271	8,037,171
1973	4,052,364	1,766,444	3,161,393	8,980,201
1974	4,251,970	1,981,240	3,465,469	9,698,679
1975	3,120,987	1,781,919	2,690,391	7,593,297

Source: Waterborne Commerce Statistics, 1965-1975.

Savannah Harbor existing commodity movements. Major commodity groups which moved in 1975 on general cargo, container, and LASH vessels include pulp and paperboard; iron and steel shapes; basic textiles; and fabricated metal products. Major liquid bulk commodities which move in tankers or ocean-going barges include distillate and residual fuels and naptha; sodium hydroxide; gasoline; liquid sulfur; crude petroleum; and asphalt, tar, and pitches. Major dry bulk commodity movements in the harbor include kaolin; gypsum; coke, petroleum asphalts and solvents; and building cement. Total Savannah Harbor tonnages approached 10 million in 1974, with these 14 major commodity groups accounting for 84 percent of total foreign and coastwise harbor tonnages in that year. In 1975, total harbor tonnages dropped to 7.6 million, with foreign and coastwise tonnages totalling 5.7 million. These 14 commodity groups represented 81 percent of harbor foreign and coastwise tons in 1975.

Commodity analysis and projection. After identification and grouping of major commodity movements through Savannah Harbor, each major group was separately investigated. For export groups, major sources were determined. For import groups, major users were determined where possible. The respective sources and users were identified by industrial group and general location. Attempts were then made to correlate historical port tonnage movements with historical earnings in appropriate earnings categories and geographical areas. In those cases where commodities did not move until recent years and adequate historical tonnages were not available, attempts were made to establish the relationships between commodity groups and industrial activity as reflected by various economic indicators. Where a clear-cut connection between a commodity group and an appropriate economic indicator could be distinguished, projected growth rates for the appropriate economic indicator were applied. If no such clear-cut connection was apparent, appropriate commodity averages for recent years were used and held constant over a 50-year project-life period. In some instances, the latter approach may be considered extremely conservative.

For purposes of analysis in terms of vessel traffic, it was useful to summarize Savannah Harbor tonnages in terms of likely vessel types, such as general cargo (including containerships), liquid bulk, and dry bulk vessels. Table 2 contains a summary of the 14 commodity types analyzed and projected for the years 1975, 1980, 1990, 2000, 2010, 2020, and 2030 by vessel type.

TABLE 2

SUMMARY OF MAJOR COMMODITY-GROUP MOVEMENTS BY VESSEL TYPE
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS
(THOUSANDS OF TONS)

	1975	1980	1990	2000	2010	2020	2030
General Cargo:							
Pulp and Paperboard	601.6	1014.5	1600.8	2391.0	3272.7	4393.6	5814.7
Iron and Steel Shapes	153.5	363.4	579.8	1006.0	1159.1	1555.1	2070.3
Basic Textiles	135.3	232.9	232.9	232.9	232.9	232.9	232.9
Fabricated Metal Prod.	135.8	213.2	374.2	577.3	805.1	1099.6	1432.8
Subtotals	(1026.2)	(1824.0)	(2787.7)	(4207.2)	(5469.8)	(7281.2)	(9550.7)
Liquid Bulk:							
Distillate & Residual Fuel & Naptha	1423.9	2684.1	4104.8	4104.8	4104.8	4104.8	4104.8
Sodium Hydroxide	99.9	123.4	161.8	213.5	271.2	344.6	437.6
Gasoline	693.5	715.0	715.0	715.0	715.0	715.0	715.0
Liquid Sulfur	115.0	140.0	140.0	140.0	140.0	140.0	140.0
Crude Petroleum	673.1	275.0	275.0	275.0	275.0	275.0	275.0
Asphalt, Tar and Pitches	299.6	237.0	237.0	237.0	237.0	237.0	237.0
Subtotals	(3305.0)	(4174.5)	(5633.6)	(5685.3)	(5743.0)	(5816.4)	(5909.4)
Dry Bulk:							
Kaolin Clay	519.4	986.9	1450.5	1971.5	2517.2	3185.9	4006.5
Gypsum	569.2	672.8	939.9	1313.1	1834.4	2562.8	3580.2
Coke, Petroleum Asphalts and Solvents	100.3	140.0	140.0	140.0	140.0	140.0	140.0
Building Cement	122.8	208.0	208.0	208.0	208.0	208.0	208.0
Subtotals	(1311.7)	(2007.7)	(2738.4)	(3632.6)	(4699.6)	(6096.7)	(7934.7)
TOTALS	5642.9	8006.2	11,159.7	13,525.1	15,912.4	19,194.3	23,394.8

1/ This table of 14 major commodity groups represents 81 percent of total oceangoing deep draft harbor traffic. This table includes traffic outside the project area but excludes all local movements.

Source: See Text

Since the tonnages by vessel type in table 2 represent the 14 major commodity groups analyzed, a realistic estimate of deep draft harbor tonnages for 1975 by vessel type may be derived by prorating the remaining tonnages among vessel types as indicated by the 14 major groups representing approximately 81 percent of deep draft totals for the harbor. Total deep draft tonnages by vessel type as thus derived are given in table 3.

TABLE 3
TOTAL DEEP DRAFT SAVANNAH HARBOR TONNAGES BY VESSEL TYPE
1975 AND PROJECTED YEARS
(THOUSANDS OF TONS)

	1975	1980	1990	2000	2010	2020	2030
General Cargo	1,266.9	2,251.9	3,441.6	5,194.1	6,752.8	8,989.1	11,791.0
Liquid Bulk	4,080.2	5,153.7	6,955.1	7,018.9	7,090.1	7,180.8	7,295.6
Dry Bulk	1,619.4	2,478.6	3,380.7	4,484.7	5,802.0	7,526.8	9,795.9
Total harbor tonnages	6,966.5	9,884.2	13,777.4	16,697.7	19,644.9	23,696.7	28,882.5

Source: See text.

Vessel analysis. Much information is available indicating historical trends in the average sizes of various types of oceangoing vessels in the world fleet. The Charleston Harbor, South Carolina, Feasibility Report published in recent years by the U.S. Army Corps of Engineers describes historical trends in terms of tankers, containerships, and dry bulk carriers. These trends are definitely indicative of increasing sizes and are considered applicable to this study.

A summary of the vessel analysis is shown in table 4. These vessel fleets were derived after careful consideration of potential tonnages, increasing average dead weight tons (dwt) in future years, increasing trends in world fleet sizes within the constraints of given Savannah Harbor dimensions, increasing proportions of general cargo commodities moving in containerships, and information from the Savannah Pilots Association regarding the harbor's capabilities to handle projected traffic. It should be noted that the Pilots Association reports that the harbor could handle the projected traffic without widening, but that this would involve increases in costs to shippers associated with increasingly larger ships and traffic congestion. For purposes of this analysis, then, harbor tonnage and fleet projections remain the same both with and without the proposed widening project. The difference in "with-project" and "without-project" conditions will be reflected by greater costs to shippers and decreased habor efficiency in the absence of the project. These greater costs are calculated later as potential project benefits in terms of increased vessel speeds and decreased operating costs.

TABLE 4
TOTAL VESSELS BY DRAFT RANGE
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS

	0'-26'	26'-32.5'	32.5'-36'	36'-38'	38' and Up	Total
1975	363	735	203	64	9	1374
1980	298	707	257	127	33	1422
1990	266	749	353	204	65	1637
2000	234	736	426	295	124	1815
2010	185	659	477	452	168	1941
2020	138	617	551	622	250	2178
2030	77	585	600	843	352	2457

Source: Appendix 1, Section B

PROBLEMS AND NEEDS

Historically, the general economy of the area has been tied to the shipping activities of the Port of Savannah. From 1962 to 1975, the total tonnage handled in the harbor increased from about 4.5 million to 7.6 million tons. To handle this increase, more and larger ships were utilized. To hold down handling costs, container systems and LASH systems were introduced into the Savannah area. With these came the larger vessels associated with these systems. This steady increase in harbor traffic and vessel size has placed a severe strain on the inner harbor navigation facilities.

STATUS OF EXISTING PLANS AND IMPROVEMENTS

In the interest of commercial navigation, the Federal Government over the years has made extensive modifications to Savannah Harbor. The existing authorized project provides for a channel 40 feet deep and 600 feet wide across the ocean bar about 8.2 miles; 38 feet deep and 500 feet wide to the East Coast Terminals; 38 feet deep and 400 feet wide to the vicinity of Garden City (Georgia Ports Authority Terminal); and 36 feet deep and 400 feet wide to the vicinity of Savannah Sugar Refining Corp., about 22.5 miles; and 30 feet deep and 200 feet wide to a point 1,500 feet below the Atlantic Coastal Highway Bridge, about 1.4 miles, a total length of 32.1 miles.

The project also provides turning basins for vessels at various locations in the harbor. Two turning basins, Port Wentworth and Argyle Island, are 30 feet deep by 600 feet wide by 600 feet long. Kings Island turning basin is presently 980 feet wide, 1,000 feet long, and 34 feet deep. However, recent authorization provides for the Kings Island turning basin to be enlarged to a width of 1,500 feet, a length of 1,600 feet, and a depth of 38 feet. This recent authorization also provided for the incorporation of GPA's LASH turning basin as an element of the existing Federal navigation project. This basin is 40 feet deep by 1,050 feet wide by 1,200 feet long. Two other turning basins, Marsh Island and Fig Island, are 34 feet deep by 900 feet wide by 1,000 feet long. These basins are shown on plate 1.

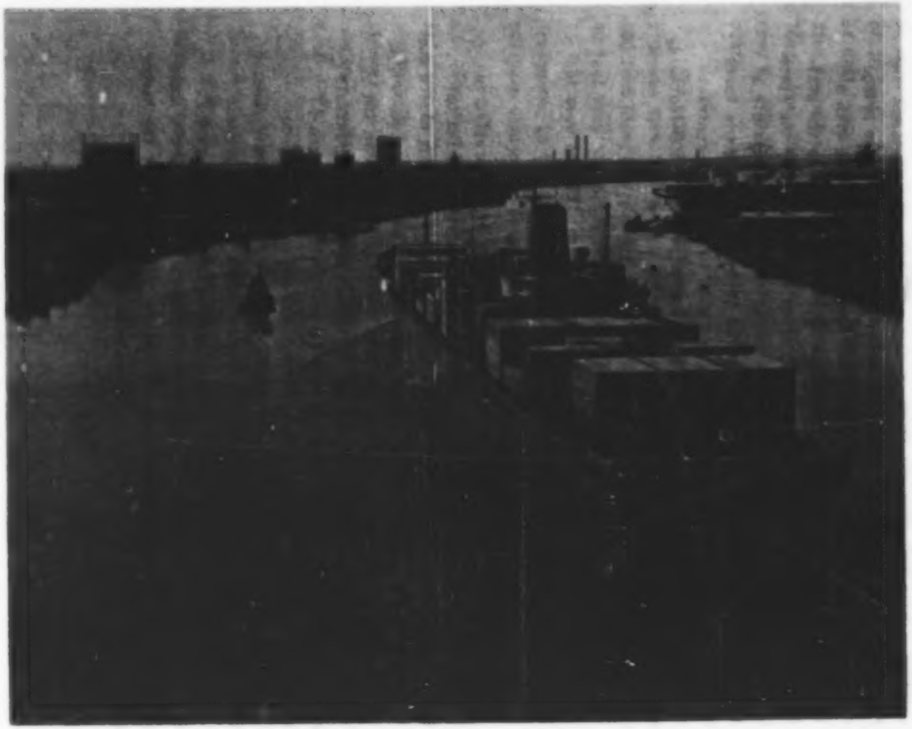
The project also provides for sediment control works consisting of a tidegate structure across Back River; a sediment basin, 40 feet deep, 600 feet wide, and about 2 miles long, with an entrance channel, 38 to 40 feet deep and 300 feet wide; a drainage canal across Argyle Island, 15 feet deep and 300 feet wide; control works and canal for supplying freshwater to the Savannah National Wildlife Refuge; and facilities to mitigate damages to presently improved areas other than refuge lands.

The only remaining segment to be completed is widening the bar channel from 500 to 600 feet at a depth of 40 feet; presently this work is approximately 80 percent complete. It is anticipated that the navigational channel will be completed during Calendar Year 1977 and the sediment control works is currently scheduled to become operational during Calendar Year 1977.

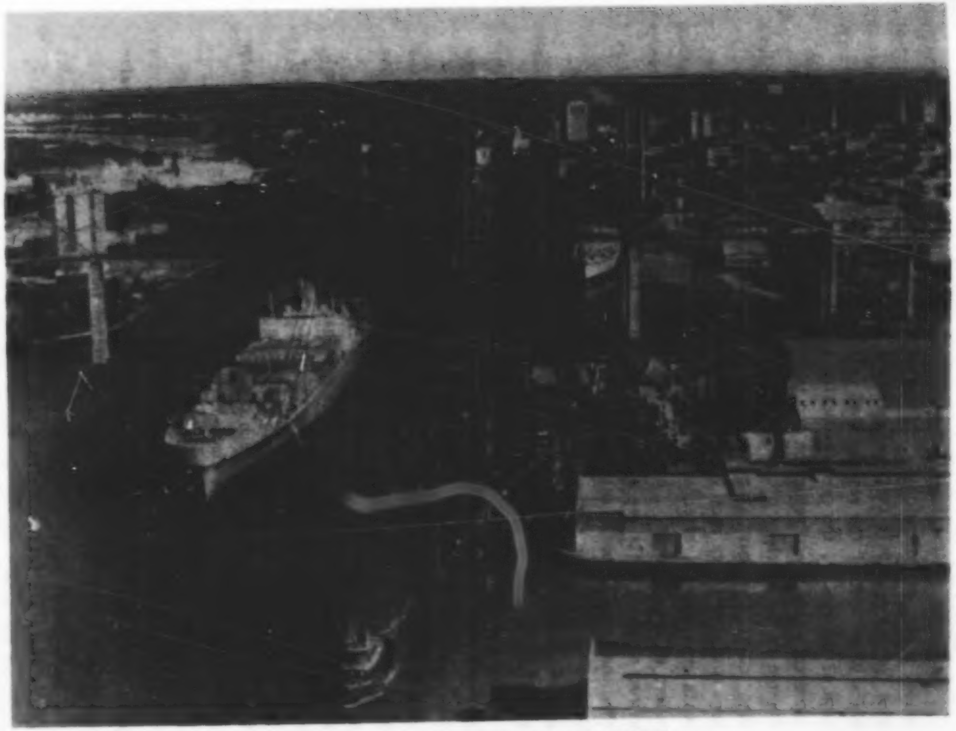
Currently, there is only one bridge across Savannah Harbor. It is the Eugene Talmadge Memorial Bridge (U.S. Route 17A), a high-level fixed span with a vertical clearance of 136.7 feet at mean high water and a width of 600 feet between piers. The former Seaboard Coast Line Railroad Bridge was struck by a vessel on the night of 23 April 1971 and collapsed. The bridge was a single-span vertical lift with a single track. The bridge opening for navigational purposes was 180 feet between fenders with a vertical clearance of 135 feet above mean high water in the raised position. The Georgia Ports Authority, with funds appropriated by the State Legislature, has had the north pier removed which will make possible a 350-foot-wide navigation channel through the bridge area. Georgia Ports Authority is currently developing plans and will soon award a contract for removal of remaining portions of the bridge to provide a 500-foot-wide navigation channel at the bridge site.

NEED FOR A WIDER NAVIGATION CHANNEL

There has been a steady increase in the density of the traffic in the upper harbor due to the accelerated shipping activities. The bar pilots state that this situation has created a serious shipping hazard due to the narrowness of the present 400-foot channel. To further compound the navigation difficulties, there has been a steady increase in the average size of all vessels in the world fleet. Some of these vessels calling at the Port of Savannah are very large in size with beams in excess of 100 feet in width. These larger size vessels experience difficulty in maneuvering in these restricted waters due to their reduced handling characteristics. Bar pilots further state that the present 400-foot channel is inadequate to safely handle these larger vessels. Furthermore, owners of these larger vessels indicate that they are apprehensive about the narrow navigation channel in this section of the harbor and the navigation hazard which it presents to their vessels.



NEW JERSEY MARU ENTERING SAVANNAH'S INNER HARBOR



NEW JERSEY MARU PASSING UNDER TALMADGE BRIDGE

Due to the restrictions imposed by the narrow inner harbor channel, vessel speeds are restricted. This results in an increased transit time for those vessels that must navigate this portion of the harbor. Since 93 percent of the vessels that call at Savannah enter this portion of the harbor, the speed reduction affects most of the harbor's commerce. This speed reduction and increased transit time is reflected in the expenses of the shippers who must pay the higher operating costs. They must also pay for the additional time the attending tugs must spend with each vessel due to the reduced speeds. These costs are, inturn, reflected in the higher shipping rates to the consumers of the products. Therefore, the reduced speeds and resulting higher shipping costs are ultimately passed on to the consumers throughout the harbor's tributary area. A wider navigation channel in this reach of the harbor would result in increased vessel speeds and lower shipping costs which whould benefit the entire tributary area.

The lower 13 miles of the navigation channel from the Atlantic Ocean to Fig Island turning basin have an authorized minimum width of 500 feet. This reach of the harbor is mostly undeveloped. As such, the passage of vessels in the channel is not hampered. However, as the vessels near the main terminals, they are not only confronted with other ships docking and undocking and the numerous smaller vessels which must tend the larger ships, they must also contend with a more narrow waterway as the channel reduces to 400 feet in width. Due to the congestion in the inner harbor, the maneuver area of the channels should be at least as large, if not larger, than that of the approach channels. This is common in other major southeastern ports where the inner harbor navigation channels are at least as large as the approach channels.

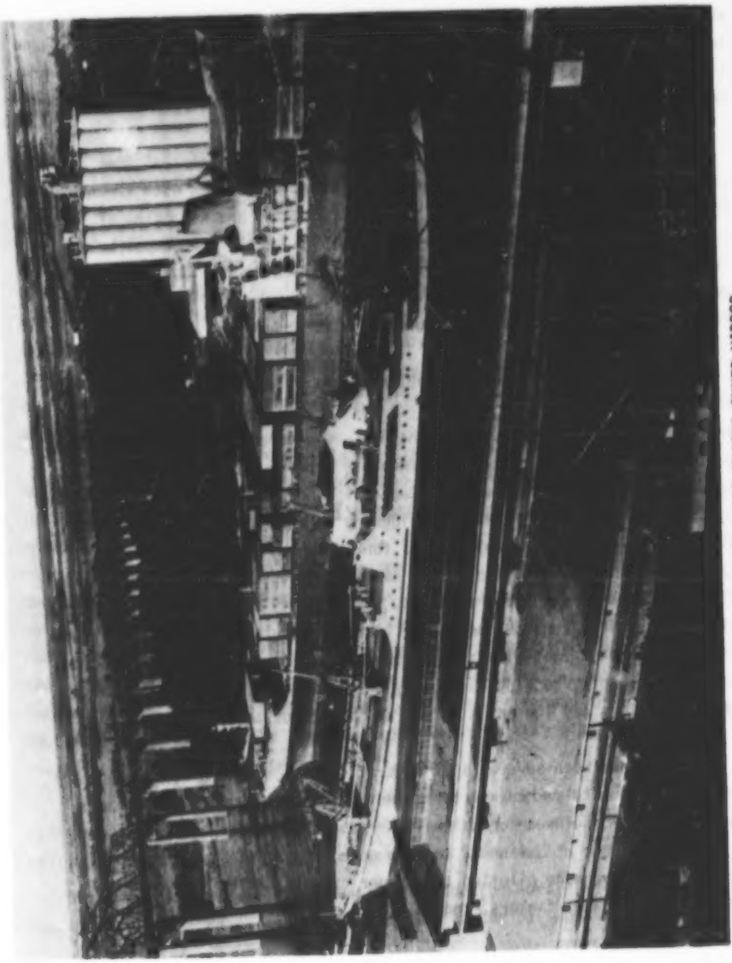
Thus, the inner harbor channel at Savannah should be at least as wide as the approach channel, especially since 93 percent of the vessels calling at Savannah enter the more restricted inner harbor channel.

There are 20 major docking areas in Savannah Harbor. The easternmost six of these are located in that part of the harbor having a controlling width of 500 feet. Traffic movements confined to these areas are not affected by the narrow 400-foot channel. The remaining 14 docking areas involve traffic movements within the confines of the 400-foot channel. It should be noted that 93 percent of all vessels calling at the harbor utilize the facilities located in the narrow reach.

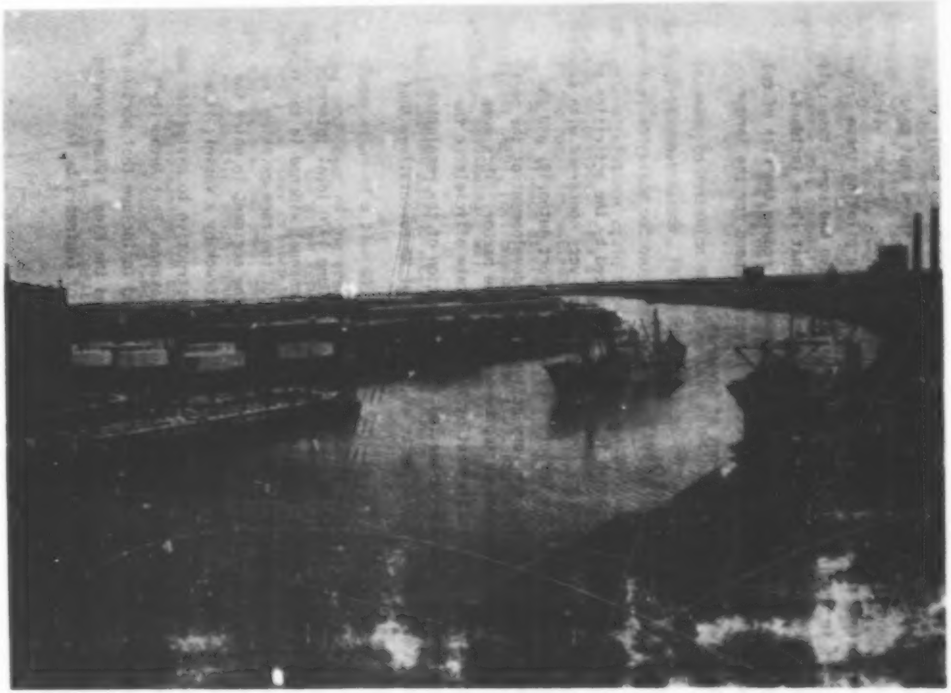
The docking and undocking of vessels in the narrow channel area are very difficult. The strong ebb and flood tides associated with the narrow channel intensify the navigation hazards of docking and undocking of larger vessels at the berthing facilities. Vessels generally are compelled to dock and undock at terminals during or near slack water. Tugboats are required to either push the ship against the dock or pull the ship away from the dock during docking and undocking procedures.

The most critical docking problem occurs in vessel mooring slips constructed at right angles to the channel. To enter these slips, the vessel must turn sideways in the channel and proceed into the slip with a minimum of lateral drift. The procedure requires constant attention by the assisting tugs. Even with tug assistance this problem is compounded by any currents in the river. Considering a cargo ship approximately 500 feet long, a considerable dam is formed across the river when the ship turns to enter the slip. This damming effect and the resultant force on the ship are proportional to the velocity of the current. This effect is obvious considering that a 500-foot-long ship is trying to turn sideways in a 400-foot-wide navigation channel of a 600- to 700-foot-wide river. Therefore, docking is usually only attempted at a slack floodtide when velocities are low and with the assistance of several tugboats.

There have been several instances of collisions and groundings in the harbor. Fortunately, none of these incidents have resulted in a major catastrophe or the need for extensive repairs. According to the Master Pilot of the Port of Savannah, the new generations of ships which call at the port have made piloting the larger vessels, which include container ships, LASH, tankers, and bulk carriers, "a new ball game."



NEW JERSEY MARU TRAVERSING INNER HARBOR



ONE-WAY TRAFFIC IN SAVANNAH

It has been due only to the ability of the bar pilots to handle the vessels under adverse circumstances and at reduced speed that major catastrophes have been avoided in the harbor so far. The bar pilots have already experienced some "near misses" while piloting these larger vessels in the inner harbor. Similarly, they have had some close calls concerning groundings. It has been emphasized that these incidents dramatize the need for a wider inner channel to reduce the risk of collisions and avoid further reductions in vessel speed for the larger vessels which call at the Port of Savannah.

IMPROVEMENTS DESIRED

The economy of Savannah is greatly influenced by the activities of the port. For this reason, local interests are very concerned with problems being experienced in the harbor. The Savannah Port Authority and the Georgia Ports Authority are very active in the development of the port and are keenly interested in improvements to the harbor. This keen interest and active involvement by local and State officials in the development of Savannah Harbor led to the adoption of the resolution by the Committee on Public Works of the House of Representatives that authorized this study.

At the initial public meeting held on 25 June 1970 local interests expressed their desire to have the navigation channel widened in the reach between Fig Island turning basin and the site of the then-existing Seaboard Coast Line Railroad Bridge. Following the accident in which the railroad bridge was partially destroyed when struck by a vessel, it was determined that the bridge was unreasonably obstructive to navigation and should be removed. This decision led to the Savannah Port Authority's request that the scope of the study be extended to include that portion of the harbor between the railroad bridge site and the Kings Island turning basin. This change was approved by the Chief of Engineers by letter dated 13 January 1972.

Since that time, the Georgia Ports Authority, Savannah Port Authority, Savannah Harbor Pilots Association, the Chatham County Commissioners, and others have repeatedly gone on record requesting that the inner harbor be widened from its present 400-foot width. This would make the inner harbor channel more compatible with the 500-foot-wide lower harbor channel.

FORMULATING A PLAN

In order to determine an appropriate solution to the problems and needs of Savannah Harbor, it was necessary to establish planning objectives that addressed not only local problems but national problems as well. Alternative solutions could then be identified that would meet those planning objectives. Each alternative was analyzed in terms of its effects on both the local and national scale. Particular consideration was given to the effects of each alternative on the four accounts of National Economic Development (NED), Environmental Quality (EQ), Regional Development (RD), and Social Well-Being (SWB).

FORMULATION AND EVALUATION CRITERIA

Formulation of a plan of improvement for Savannah Harbor to meet the navigational needs of the area involved the use of criteria adopted in accordance with the Water Resources Council's (WRC) Principles and Standards (P&S) and other related policies. Based on this criteria, the problems and needs of the area, and the scope of the study, the following planning objectives which should be addressed in the study were established.

a. Improve navigation conditions in the harbor between Fig Island turning basin and Kings Island turning basin.

b. Reduce in-port operating costs and transit times.

c. Provide for the safety of ships entering and leaving the harbor.

d. Enhance the growth and development of the port and tributary area.

e. Enhance the quality of the environment, both human and natural.

To insure uniformity in the analysis of the alternatives considered to meet these objectives, it was also necessary to establish a standard set of evaluation criteria. Such criteria, technical, economic and environmental, permit the development and selection of an alternative plan that best responds to the problems and needs of the area and fulfills the planning objectives.

The following technical, economic, and environmental criteria were adopted for use in formulating a plan:

a. The selected plan should be consistent with local, regional, and State goals for port and industrial growth.

b. Dimensions (length and width) of the channel should be adequate to accomodate expected user vessels for the foreseeable future.

c. Adequate land should be available to accomodate the contemplated harbor modifications and for placement of dredged material.

d. The proposed plan should be economically justified, that is, tangible benefits exceed project economic costs.

e. There should be no more economical means, evaluated on a comparable basis, of accomplishing the same purpose which would be precluded from development if the plan were undertaken. The plan resulting from application of the foregoing criteria provides a baseline for consideration of the numerous other factors which are not reflected in quantifiable economic terms, but which may warrant modification of the plan.

f. The costs for alternative plans of development were based on preliminary layouts, estimates of quantities, and July 1976 unit prices. The benefits and costs are expressed in comparable quantitative economic terms to the maximum extent possible. Annual cost and benefits are based on a 50-year period of analysis and an interest rate of 6-3/8 percent. No interest during construction was included for each element of the project, as each element could be completed within 2 years. The annual charges for the project did not include any maintenance costs since it is anticipated that none of the alternatives would cause an appreciable increase in the amount of shoaling in Savannah Harbor.

g. The available sources of expertise should be used to identify forms of marine life which might be endangered, damaged, or destroyed by plan implementation.

h. The use of natural resources to effect implementation of a plan should be minimized.

i. The adverse social impacts (noise, esthetic values, and health) should be minimized to the maximum possible extent.

j. Air emissions from construction of the project and any industrial growth stimulated by the project should be minimized to the maximum extent possible.

k. Measures should be incorporated into the selected plan which protect, preserve, or enhance environmental quality in the project area.

READEX FICHE

l. The adverse impacts on area recreation resources should be minimized.

m. Plans should be coordinated with interested Federal and non-Federal agencies, local groups, and individuals through cooperative efforts, conferences, public meetings, and other procedures.

POSSIBLE SOLUTIONS

In order to develop a suitable course of action concerning the feasibility of widening the inner harbor's 400-foot channel, it was necessary to analyze various alternative solutions with regard to their effects on existing conditions. The alternatives selected for consideration include:

A. No development alternative.

B. Nonstructural alternative of formally programming traffic movements in the harbor.

C. Alternative of constructing a barge lane on the north side of the existing channel.

D. Alternative of widening the existing channel within the scope of the authorized study.

The "no development" alternative (Alternative A) would consist of leaving the harbor as it currently exists, 400 feet wide between Fig Island turning basin and Kings Island turning basin. This alternative would represent the "without project" conditions of the future. It would incur no additional Federal expenditures nor require additional Federal action.

Alternative B consists of adopting a system for formally programming or scheduling traffic movements in the harbor. This would not require any additional Federal expenditure. It would require some expenditures on the part of the local interests in order to set up the controlling and responsible authority. There would also have to be coordination between the local interests and the Coast Guard to insure safe and efficient operation.

Alternative C consists of constructing a barge lane on the north side of the existing channel. This would require minimal channel work. It would, however, involve the relocation of the facilities on the north side of the channel. This would be necessary to allow clearance for the ships that dock in the area.

Alternative D consists of widening the existing channel between Fig Island turning basin and Kings Island turning basin. This would require significant dredging and relocation. Most of the facilities on the northern shore of the river would require relocating to provide room for the new channel area and the new harbor line.

ALTERNATIVES CONSIDERED FURTHER

The "no development" alternative (Alternative A) represents the "without project" conditions for the future. Based on the analysis presented in section B of appendix 1, the "no development" alternative would not directly affect the growth of the harbor or potential increases in shipping. The projected growth of the harbor and shipping was based on industrial activity and historical data. The vessels that utilize the harbor would continue to do so. As trade increased, the vessels that call at the harbor would increase in size and number. The harbor pilots, who informally program traffic movements in the harbor, would continue their operations to insure safety and minimize conflicts.

The continued increase in shipping in the harbor under the "no development" alternative would result in a corresponding increase in congestion and vessel transit time. This would result in an excessive rise in shipping costs which would adversely affect shippers and industry utilizing the port. Some industry might seek other ports in an effort to hold down shipping costs. New industry attempting to locate in the area would be discouraged due to the higher shipping costs involved. While most of these impacts would be of a regional nature, the increase shipping costs would have adverse impacts on the national market as well. The rise in the price of the commodities handled in the port would be passed on to consumers throughout the area of distribution, which for Savannah covers much of the Eastern United States and several foreign countries.

Although the harbor pilots would continue to exercise their control over traffic movements in the harbor, the chances for a serious accident would increase with the size and number of vessels. The larger the vessel, the more difficult it is to maneuver in a restricted channel. Therefore, the possibility for a serious accident would greatly increase.

The social impacts of Alternative A would be negligible, although there would be some minor long-term adverse impacts on the social well-being of the community due to the increased cost of commodities handled through the port. The impacts on the environment would also be negligible since nothing would be done to change things as they now exist.

Alternative B consists of adopting means whereby traffic movements in the harbor can be rigidly controlled. A special traffic control center would have to be established to handle the ships that call at Savannah. This traffic control center would assume the responsibility for scheduling all vessel movements in the harbor. The informal program currently conducted by the harbor pilots would be expanded to provide for a detailed scheduling of vessel arrivals and departures and shifts in location.

Adoption of Alternative B would not result in a substantial impact on the vessel operations currently being experienced. There would be some impact where actual vessel arrival or departure times coincided with the scheduled times. However, due to the many variables involved in loading, unloading, and vessel transit, exact movement times are nearly impossible to establish. Therefore, delays would be inevitable. While this alternative represents an improvement over the existing conditions by increasing the control over vessel movements, it does not substantially alleviate the shipping problems currently being experienced, nor would it result in a reduction in vessel transit times.

The overall impacts on shipping would be similar to those of Alternative A. The larger vessels calling at the harbor would continue to experience increasing transit times even though safety conditions would be improved and vessel movements carefully controlled.

Economic impacts associated with Alternative B would be mainly adverse and similar to those of Alternative A. There would be no impact on vessel transit times or on tug requirements. The rise in shipping costs would also result in a rise in the price of commodities handled in the port. This rise would be passed on to consumers throughout the tributary area. There would also be an increase in the economic burden on the local government in order to provide and support the traffic control center.

The environmental impacts of this alternative would be negligible since no physical alterations of the harbor would be involved. The social impacts would also be mainly negligible, although there would be some minor adverse impacts associated with the increasing costs through time.

Alternative C consists of constructing a barge lane adjacent to the north side of the existing navigation channel. To provide this lane, berthing facilities and the harbor line on the north side of the channel would have to be moved back to provide 125 feet (berthing area width) from the edge of the barge lane. This would affect most of the shoreline development on Hutchinson Island. Minimal dredging would be required to actually provide the lane. The main dredging involved would be found in the relocation of the berthing areas where ship channel depths would have to be provided to accomodate calling ships.

As previously stated, the projections of future vessel traffic in the harbor were held constant for the "with" and "without" project conditions. Therefore, potential benefits were only calculated on a reduction in vessel transit time and vessel operating expenses primarily associated with increased vessel speed and reduced tug costs. The construction of the barge lane would provide for a reduction in the operating costs of barge traffic by allowing them to operate outside of the main ship channel. However, the operation costs of the larger vessels would be unaffected since there would be no reduction in vessel transit time or operating expenses. Also, there would be a slight increase in congestion on the north side of the river where the berthing facilities are located. This would be due to the concentration of barge traffic in the narrow strip between the berthing areas and the ship channel.

The overall impacts on shipping would be similar to those of Alternative A. The larger vessels calling at the port would experience increasing congestion and vessel transit times which would result in higher operating costs. There would be some beneficial impacts on barge traffic. However, these would be minor when compared to the continuing adverse conditions for the larger vessels. Those industries utilizing barge traffic would benefit, while those relying on larger vessels would continue to suffer higher shipping costs.

A major adverse impact of this alternative on the economy is the construction cost involved. While the cost of the channel dredging would be minimal, the cost of relocations would be high. When analyzed with potential benefits, the costs far exceed the nominal benefits derived.

The social impacts of Alternatives C would be similar to those for Alternative A. There would be some beneficial impacts on the area due to the construction effort. However, there would also be a substantial drain on the local economy in order to finance the project, with only minimal returns.

The environmental impacts of Alternative C would be adverse though generally minor. The dredging activities would temporarily degrade the water quality and destroy the bottom-dwelling biota. The relocations activity would generate temporary adverse noise and esthetic impacts along with some air pollution. Other adverse impacts would be associated with the disposal of the dredged material.

Alternative D consists of widening the navigation channel between the Fig Island turning basin and Kings Island turning basin. This widening would be accomplished on the northern side of the existing channel and would entail the relocation of the shoreline facilities on Hutchinson Island that would be affected. In addition to the channel widening, the harbor line would have to be reestablished to provide the 125 feet necessary for the berthing areas. Since the lower harbor up to the Fig Island turning basin consists of a channel 500 feet wide, initial impact assessments were based on a similar size channel for the upper harbor.

The main economic impacts of this alternative are associated with the potential benefits and estimated costs. The potential benefits for widening the channel were derived from the reduction in vessel transit time and tug costs associated with the width of the channel. The wider channel would increase the operating speed and efficiency of all vessels in the harbor. It would also reduce some of the problems encountered in docking and undocking procedures.

The reduction in transit and operating time would result in a reduction in the shipping costs. This would have beneficial effects on not only the industry directly involved but on the consumer as well. The reduced shipping costs would eventually be passed on throughout the tributary area and market area. While there may not be a reduction in commodity price, the inflationary pressures of Alternative A would not be present.

In the port area, the reduction in shipping costs would stimulate the associated industrial activity which, in turn, would have beneficial impacts on the community. Also, new industry coming into the area would be encouraged by the improved navigation conditions.

A major adverse impact of this alternative would be the cost associated with the construction. These costs would adversely affect both the local economy and the national economy. However, there would be some indirect benefits associated with the cost of construction in terms of providing additional jobs in the port area. The construction effort would require input from several sectors of the local economy including the labor pool, private contractors, and building material suppliers.

The social impacts associated with Alternative D would be relate to the beneficial impacts of the widening on the economic conditions of the harbor area. Increased employment and total income would have minor beneficial impacts on the area. Other effects related to the social well-being of the community would also be minor.

The environmental impacts of Alternative D would be mainly temporary. There would be a temporary degrading of water quality associated with the dredging activities. There would also be a temporary disruption of the biological communities located near the dredging site. There would be some temporary adverse noise pollution, esthetic degradation, and air pollution associated with the construction effort. Other impacts would be related to the disposal of the dredged material and would depend on method and location of disposal. One adverse impact that would not be temporary would be the loss of about 27 acres along the shoreline on the north side of the river.

In comparing the four alternatives, Alternative A fails to meet any of the planning objectives. It also has negative impacts on NED, RD, and SWB due to the continued increase in vessel transit times and operating costs. Alternative B meets only one planning objective, that of providing for the safety of ships. It fails to fulfill any of the others. Alternative B also has negative impacts on NED and RD due to the increasing shipping costs. Minor adverse impacts on SWB are associated with the rising commodity prices. Impacts on EQ would be negligible. Alternative C only partially meets the planning objectives of improving navigation conditions and reducing in-port operating costs. It also fails to meet the other objectives. The net impacts of Alternative C on NED are adverse due to the costs of the alternative far exceeding the potential benefits. The minor benefits that would accrue from the barge lane would not offset the costs involved. The local costs would adversely affect RD and SWB of the port area. Impacts on EQ would also be adverse due to the dredging and construction involved.

Alternative D meets most of the planning objectives through improving navigation, reducing in-port operating costs, providing for the increased safety of ships, and enhancing the growth and development of the port and tributary areas. The objective of enhancing the environment is not fulfilled by the dredging operations. However, enhancement of the environment may be obtained through the proper selection of methods of construction and disposal areas. The net impact on NED would be beneficial due to the reduction in operating costs and vessel transit times. The impacts associated with RD and SWB would also be beneficial due to enhancement of the growth and development potentials of industry in the area. Impacts on EQ would be mainly adverse, resulting from the dredging and construction activities. However, beneficial impacts could be obtained through the use of certain disposal areas or methods of construction.

Therefore, based on the impacts of the four alternatives on NED, RD, SWB, and EQ and their ability to meet the planning objectives, Alternative D was selected for further analysis to establish a plan that represents the best solution to the problems and needs of the area.

DEVELOPMENT OF DETAILED PLANS

In the preceding paragraphs, four alternate plans for addressing the problems and needs of the study area were analyzed. Of these, Alternative D was selected as the plan that would best address those problems and needs. In keeping with the guidelines established in P & S, Alternative D was analyzed and modified to develop one plan that would maximize the contributions to NED and another plan that would maximize the contributions to EQ. These two plans were then analyzed and compared to determine the most appropriate course of action.

In developing a NED and EQ plan, consideration was given to the national objectives of:

a. Increasing the value of the Nation's output of goods and services and improving national economic efficiency (NED).

b. Enhancing the quality of the environment by the management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems (EQ).

Therefore, the NED plan developed from Alternative D should maximize the increase in the Nation's output and efficiency while the EQ plan should maximize the enhancement (or minimize the degradation) of the environment. Considering the scope of the study authorization, the design criteria set forth in Section E, the desires of the local interests, and the width of the channel in the lower harbor, the width of the channel widening was determined to be 100 feet. This would provide a 500-foot-wide channel throughout most of the harbor. Any reduction in this widening would adversely impact vessel speeds and result in a channel that could not adequately and safely handle the vessels that call at the port without excessive increases in operating time and expenses. A wider channel would result in only a limited increase in benefits due to the restrictions imposed by the lower harbor channel and the Talmadge Bridge, while the costs of the widening would increase substantially. Additional widening would also involve a substantial removal of additional land from Hutchinson Island, thus severely affecting future as well as existing development.

By utilizing the 500-foot width as a base condition and choosing different methods of construction and disposal, a NED plan can be developed that maximizes the Nation's output and efficiency. Also, an EQ plan can be developed that maximizes the enhancement of the environment. Since the direct benefits of the widening are fixed by the design width, the cost of construction must be kept at a minimum in order to maximize NED. Also, since the direct impacts on the environment result from the actual construction and the disposal of the dredged material, the method of construction and disposal should be designed to minimize the adverse impacts on EQ and enhance the environment where possible.

The various methods of construction center mainly on the different techniques of dredging material from the river: a pipeline, hopper, or bucket dredge, or a dragline operating from the riverbank or from a barge. The use of a hopper dredge is not considered feasible for widening the river due to the limited operating width (100 feet) and the existing channel side slope. The reach between the Engineer Yard and the Talmadge Bridge would require either a bucket dredge or a dragline to remove the material due to the presence of old piling and discarded construction materials. The remaining channel widening can be accomplished using any of the methods.

Another variable method in construction is that related to timing. As noted earlier, the Savannah River is host to two species of fish that make spawning runs up the Savannah River in the spring. While some studies indicate that dredging does not affect these runs, local and State officials have expressed concern over the possible adverse effects of the dredging on these fish. Therefore, another method of construction consists of timed dredging where dredging would be halted during the spawning runs.

The different methods of material disposal depend to a large extent on the method of dredging. Pipeline dredging involves either overboard disposal outside of the dredging area or pumping the material to a diked area where it can be contained. Bucket dredging involves placing the material on a barge to be carried to either an open-water disposal site or some point of discharge or transfer. Dragline dredging involves placing the material on either a truck or barge in order to haul it to either a landfill site or an open-water disposal site.

The use of overboard disposal in Savannah Harbor is not practical due to the confined waterways involved. Pumping the material to a diked area is feasible where adequate dikes and drainage can be provided. Open-water disposal is also feasible provided the material is placed so that it would not wash back into the channel. Landfill operations are generally desired in the Savannah area in order to provide additional high ground for industrial development.

Based on the methods of construction and disposal presented above, possible sites were analyzed to determine their feasibility for use as disposal areas. The areas shown on Plate D-1 of Appendix 1 represent the various areas considered for material disposal that are available for use (as determined by local interests). Except for the ocean disposal site, the areas are not currently being used for disposal and they are not scheduled for use as maintenance disposal areas. The disposal sites consist of:

- The ocean disposal area located just south of the seaward end of the bar channel.

- The beach disposal site located on Tybee Island at Savannah Beach.

- Area A (30 acres) and Area B (40 acres) located on a small canal on the southern bank of the river between Flintkote Company and the East Coast Terminal approximately one-half mile east of the Fig Island turning basin.

- Area C (140 acres) located approximately one-half mile south of Fig Island turning basin adjacent to President Street.

- Area D (45 acres), consisting of two abandoned slips and the area surrounding them, located on Hutchinson Island on the north bank of the river just east of Georgia Kaolin.

- Area E (122 acres) located on Hutchinson Island approximately three-quarters of a mile north of Georgia Kaolin adjacent to the Back River and the tidegate road.

- Area F(a) (38 acres) and F(b) (42 acres) located under and adjacent to the Talmadge Bridge on Hutchinson Island.

- Area G (89 acres) located on Hutchinson Island approximately one mile west of the Talmadge Bridge, bounded on the south by the river, on the west and north by the SCL Railroad, and on the east by other underdeveloped property.

- Areas H (68 acres) and I (65 acres), upland areas located along the Dundee Canal which empties into the Savannah River on the southern bank across from the Marsh Island turning basin.

Since the direct benefits of the widening are determined by the channel width, the cost of construction must be kept at a minimum in order to maximize NED. To determine the least cost method of construction and disposal, the disposal areas were evaluated to determine the costs involved in utilizing each area. To effectively determine the costs associated with using each particular site, it is necessary to analyze the dredging and disposal requirements.

The dredging requirements for the widening were broken down into reaches based on location or special techniques required. Reach 1 lies between Fig Island turning basin and the Engineer Yard and contains approximately 344,000 cubic yards of material that would have to be dredged. Reach 2 lies between the Engineer Yard and the slip at Georgia Kaolin. This area contains approximately 476,000 cubic yards of material that would have to be dredged with either a bucket dredge or a dragline due to the presence of old piling and debris. Reach 3 lies between the slip at Georgia Kaolin and the Talmadge Bridge. This area contains approximately 512,000 cubic yards of material that would also have to be dredged using either a bucket dredge or a dragline due to the debris. Reach 4 lies between the Talmadge Bridge and the SCL Railroad Bridge site. This area contains approximately 472,000 cubic yards of material that would require dredging. Reach 5 lies between the SCL Railroad Bridge site and Kings Island turning basin. It contains 1,147,000 cubic yards of material that could be dredged with a pipeline dredge.

Based on the disposal area capacities, the comparative dredging costs, and the dredging requirements discussed above, the following plan was developed that would minimize the cost of the construction. Reach 1 would be dredged with a pipeline dredge and pumped to a part of Area E. Reach 2 would be dredged with a dragline and the material would be hauled to Area F(a) where it would be used as landfill. Reach 3 would also be dredged with a dragline. The material would be hauled to Area F(b) where it would also be used as landfill. Reach 4 would be pumped into Area E. Reach 5 would be dredged with a pipeline dredge and the material would be pumped into Areas G and H.

This dredging and disposal plan constitute the NED plan for widening the harbor. It represents those variables that maximize the contributions to the NED account. The total estimated cost of this plan, based on the items mentioned above, is shown in table 5.

By taking the 100-foot widening as the base condition and analyzing the methods of construction and disposal and the possible disposal areas, a plan can be developed that makes positive contributions to EQ or mitigates the inherent adverse effects of the widening.

As previously noted under methods of construction, a variable in the construction of the widening project is associated with the timing of dredging. To avoid any possible adverse effects on the spawning migrations of the shad and striped bass in the spring, the EQ plan contains provisions for halting dredging activities during the months of February through May. The additional costs associated with this action are included in the additional mobilization and demobilization costs shown in the summary of estimated costs for the EQ plan.

Since the material dredging requirements were already noted, the only remaining variable is the method of disposal. The impacts generated by the disposal of the dredged material can be controlled through the careful selection of disposal methods and sites, analyzing the significant beneficial and adverse impacts associated with using each site. By selecting the ocean

TABLE 5
SUMMARY OF ESTIMATED COST
NED PLAN

Feature		Cost
Dredging		
Reach 1, 4, 5,		
1,963,000 c.y. @ $1/cy		$1,963,000
Reach 2		
476,000 c.y. @ $2.05/cy		976,000
Reach 3		
512,000 c.y. @ $1.40/cy		717,000
Subtotal		$3,656,000
Contingencies (15%)		548,000
Subtotal		$4,204,000
Engineering and Design (8%)		336,000
Supervision and Administration (6%)		252,000
Total Dredging Cost		$4,792,000
Navigation Aids		20,000
Relocations		123,000
Clearing and removal of improvements		151,000
Lands and damages		2,894,000
Disposal areas		
Easements	$369,000	
Dikes and wastweirs	$198,000	
Total Disposal areas		567,000
Total estimated first cost of NED Plan		$8,550,000

disposal site, the beach nourishment site, and the disposal area C site, beneficial impacts can be obtained. The use of the ocean disposal site provides beneficial impacts through the potential creation of fish habitat by proper placement of the debris that is to be removed from the harbor. The use of the beach nourishment site provides beneficial impacts on the environment through the nourishment of a recreational beach and the provision of additional storm protection for Tybee Island. The use of Area C provides beneficial impacts through the reduction of a mosquito control problem in an urban area and the elimination of a potential source of encephalitis.

Based on the use of these three disposal sites, costs were developed for the EQ plan. The estimated first costs are shown on table 6. The dredging costs were based on (1) dredging reaches 2 and 3 with a bucket dredge so the material could be loaded on barges and hauled to the ocean disposal site, (2) dredging reaches 1, 4, and part of 5 with a pipeline dredge and pumping it to Area C, and (3) dredging the rest of reach 5 with a bucket dredge and hauling the material to Tybee Island where it would be used in the beach nourishment program. This plan consisting of the above dredging and disposal plan combined with the timed dredging activities represents the plan that has the most beneficial impacts on the environment. It is therefore designated as the EQ plan.

IMPACT ASSESSMENT

The NED and EQ plans developed in the preceding pages provide two equally detailed and implementable alternatives for widening Savannah Harbor in order to meet the navigation needs of the study area. In order to determine the most appropriate course of action, it is necessary to analyze each of these plans to determine the significant impacts each plan would have on the study area. The effects listed below result from the implementation of a particular plan and reflect the changes in the study

TABLE 6
SUMMARY OF ESTIMATED COST
EQ PLAN

Feature		Cost
Dredging		
Reach 2,3, ocean disposal		
988,000 cy @ $3.75/cy		$3,705,000
Reach 1 Area C		
344,000 cy @ $1.50/cy		516,000
Reach 4,5 Area C		
781,000 cy @ $2.50/cy		$1,953,000
Reach 5 Beach nourishment		
838,000 @ $4.25/cy		3,562,000
Subtotal Dredging		$9,736,000
Additional Mobilization & Demobilization		100,000
Subtotal		$9,836,000
Contingencies (15%)		1,475,000
Subtotal		$11,311,000
Engineering and Design (8%)		905,000
Supervision and Administration (6%)		679,000
Total Dredging Cost		$12,895,000
Navigation Aids		20,000
Relocations		123,000
Clearing and Removal of Improvements		151,000
Lands and Damages		2,894,000
Disposal Areas		
Easements	$168,000	
Dikes and wasteweirs	57,000	
Total Disposal Areas		225,000
Total EQ Plan		$16,308,000

area in relation to the base year conditions. Specific impacts are shown in table D-6 of Appendix 1.

The NED plan, as developed earlier, provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island turning basin to the Kings Island turning basin. This widening would be accomplished using a pipeline dredge and a dragline and placing the dredged material in disposal areas E, F, G, and H.

The main economic effects of the NED plan are related to the costs associated with construction and the benefits associated with reduced shipping costs . Since the NED plan was developed to produce the maximum excess of benefits over costs, it provides the greatest return for each dollar spent. This is evidenced by a benefit-to-cost (B/C) ratio of approximately 1.73. Therefore, the net effect on the economy would be beneficial. There would be some adverse effects on the economy associated with the relocations and loss of land. However, these should be minor when compared to the benefits obtained.

The main environmental effects of the NED plan would result from the dredging and disposal of material. The dredging activity would increase water turbidity and release the heavy metals and organic materials trapped in the bottom sediments. This would have an adverse impact on the marine life in the dredging area. The larger, free-swimming species would move out of the area. The less mobile species and the bottom biota in the immediate vicinity of the dredging would be destroyed. The dredging would also destroy the plantlife and wildlife habitat on 27 acres of land to be removed as part of the widening. The disposal activities would destroy the vegetation and wildlife habitat on 359 acres of land chosen as disposal areas. The larger animals and birds in these areas would move out of the area. The other animals that could not escape would be destroyed. Other impacts of the plan would be either minor or temporary.

The significant social effects of the NED plan would stem from the improved economic conditions of the area. There would be beneficial impacts on the general well-being of the community. There would also be adverse impacts associated with the noise and esthetic degradation generated by the construction. These impacts should be temporary.

The EQ plan, as developed earlier, provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island turning basin to the Kings Island turning basin. This widening would be accomplished by using timed dredging with a pipeline dredge and a bucket dredge and placing the material in the ocean disposal site, at the beach nourishment site, and in Area C.

The main economic effects of the EQ plan are related to the costs associated with construction and the benefits associated with reduced shipping costs . Since the EQ plan was developed to maximize the enhancement of the environment, more emphasis was placed on the attainment of intangible values rather than economic optimization. Therefore, this plan represents a more costly plan than does the NED plan as illustrated by the B/C ratio of 0.91 to 1. The net effect on the economy would be adverse due to the costs exceeding the benefits. There would be other adverse effects on the economy associated with the relocations and loss of land. However, these should be minor.

The main environmental effects of the EQ plan would result from the dredging and disposal of material. The dredging and open-water disposal activity would increase water turbidity and release the heavy metals and organic materials trapped in the bottom sediments. This would have an adverse impact on marine life in the dredging and disposal areas. The larger, free-swimming species would move out of the area. The less mobile species and bottom biota would be destroyed. This plan would not affect the migrating species of striped bass and shad since dredging activity would be halted during the migration period. The dredging would also destroy the plantlife and wildlife habitat on the 27 acres of shoreline area to be used. The disposal on Area C would destroy the vegetation and wildlife habitat on 140 acres of land. The larger birds and animals in these areas would move out of the areas. The other animals that could not escape would be destroyed.

The use of the ocean disposal site would have limited beneficial impacts associated with the creation of fish habitat. Also the use of the beach nourishment site would enhance the natural resources of the area. Other impacts of the EQ plan on the environment should be temporary or minor.

The significant social effects of the EQ plan would stem from the improved economic conditions of the area. There would be beneficial impacts on the general well-being of the community associated with the improved economy of the area. There would also be significant beneficial impacts associated with the enhanced recreational opportunities at Savannah Beach and with the reduced mosquito problem and potential encephalitis problem of Area C. Adverse impacts associated with the noise and esthetic degradation generated by the construction would be temporary. Other social effects would be either minor or temporary.

EVALUATION

Evaluation involves determining the contributions, both beneficial and adverse, each alternative plan would make toward fulfilling the planning objectives of the study. Evaluation also involves an appraisal of the contributions each plan makes to the system of accounts of P & S, notably NED, EQ, RD, and SWB. The third activity of evaluation involves applying specified criteria to the alternative plans to test their responsiveness.

Finally, evaluation involves making a "trade-off" analysis of each alternative to determine the comparative contributions of each alternative plan. These activities then provide a basis for selecting the most appropriate course of action.

The first activity of evaluation involves determining each alternative plan's fulfillment of the planning objectives. The NED plan fulfills the objectives of improving navigation conditions, reducing in-port operating costs, providing for the safety of ships that enter and leave the port, and enhancing the growth and development of the port and tributary area. The NED plan only partially fulfills the objective of enhancing the environment by only enhancing the human environment and not the natural environment.

The EQ plan would fulfill the objectives of improving navigation conditions, reducing in-port operating costs, and providing for the safety of ships that enter and leave the port similar to the NED plan. The EQ plan would also enhance the growth and development of the port and tributary area. However, the increased cost associated with the EQ plan would result in a substantial decrease in the net benefits. This would decrease the favorable impacts of the plan on the local and national economy. The EQ plan would also fulfill the objective of enhancing the quality of the environment, both human and natural.

Therefore, the NED plan fulfills all of the planning objectives except enhancing the quality of the natural environment, while the EQ plan fulfills all of the planning objectives including the enhancement of the environment.

The significant impacts of each plan must also be evaluated to establish the plan's contributions to the NED, EQ, RD, and SWB accounts of P & S. These impacts were identified in the impact assessment provided earlier. The significant effects on the four accounts are shown on table 7 for each plan.

The net effect of the NED plan on the NED account would be beneficial due to the favorable impacts of the project on navigation and the economy. The net effect on EQ would be adverse due to the adverse effects associated with the construction and disposal of material. The net effect on RD and SWB would be beneficial due to the favorable impacts of the plan on shipping, industry, and the economy of the harbor area.

The net effect of the EQ plan on the NED account would be adverse due to the cost of the project outweighing the benefits. The net effect of the EQ plan on EQ would be beneficial due to the improved human and natural environment associated with the reduction of the mosquito problem, the creation of an artificial fishing reef, and the provision of additional beach for recreation and storm protection at Savannah Beach. The net effect of the EQ plan would also be beneficial to the RD and SWB accounts due to the improved economy of the area, the increased recreational opportunity, and the reduction of a potential health problem.

Therefore, the NED plan has a beneficial impact on the NED, RD, and SWB accounts and an adverse impact on the EQ account. The EQ plan has a beneficial impact on the RD, SWB, and EQ accounts and an adverse effect on NED. However, the impacts of the EQ plan on the RD and SWB accounts would be less beneficial than the impacts on these accounts generated by the NED plan.

The third evaluation activity involves applying specified criteria to the alternative plans to test their responsiveness. These criteria are: acceptability, completeness, effectiveness, efficiency, certainty, geographic scope, NED benefit-cost ratio, reversibility, and stability.

The NED plan is acceptable to the general public in the study area. It is also strongly supported by the local officials. The NED plan is complete within itself, assuming normal harbor growth would continue.

The NED plan is the most efficient means for widening the harbor and improving navigation. The NED plan has certainty in that it would reduce existing vessel operating costs and transit times. The NED plan primarily affects the harbor area. However, the entire tributary area would be affected by the plan. The resulting NED benefit-cost ratio would be 1.73 to 1. This plan, once implemented, would be only partially reversible. Changes brought about by construction and disposal of dredged material would be hard to reverse. Also, once implemented, the plan would be fairly stable due to the relative insensitivity of the plan to changes in furute projections.

The EQ plan is also acceptable to the general public in the study area. The EQ plan is complete within itself, assuming normal harbor growth. The EQ plan is an effective means for reducing in-port operating costs. It is also an effective means for enhancing the environment. The EQ plan is not the most efficient plan for widening the harbor. It is the least costly plan for widening the harbor and enhancing the environment as proposed. The EQ plan has "certainty" in that it would reduce existing and future vessel operating costs. The effects of the EQ plan are primarily in the general harbor area. However, the entire tributary area is affected by the plan. The NED benefit-cost ratio of the EQ plan is about 0.91 to 1. This plan, once implemented, would be only partially reversible. Certain changes related to the construction and disposal of dredged material would be irreversible. Also, once implemented, the plan would be fairly stable due to the relative insensitivity of the plan to changes in future projections.

In the preceding discussion, the NED and EQ plans have been developed and analyzed to determine the impacts associated with each plan and the contributions of each plan to the planning objectives and to the system of accounts. A summary of the evaluation and impact analysis is presented on table 7 and later on table 15. As noted on these tables, the NED plan was designated Plan A and the EQ plan was designated Plan C. In order to determine the most appropriate plan of action, it is necessary to compare the alternative plans considered and select those features of each plan that provide mainly beneficial impacts and contributions. The resulting plan that is thus derived will be designated Plan C for reference.

As developed earlier, both the NED and the EQ plan provide for widening the harbor by 100 feet on the northern side of the existing channel between the Fig Island turning basin and the Kings Island turning basin. Therefore, this will be the basic criteria for Plan C. The different features of the NED and EQ plans that must be compared are the timing of construction and the respective disposal areas.

Under the NED plan, the construction activity would be carried from start to finish with no emphasis placed on dredging during any particular period. The EQ plan provides for halting the dredging activities during the period from February to May. This would be done to eliminate any possible interference with the spawning migrations of the striped bass and shad. Previous studies and observations during dredging activities have noted that the dredging appears to have little effect on the migration of the fish. The confinement of the dredging activity and the width of the river generally provide ample room for the fish to avoid the area. However, concern has been expressed at the State and Federal level over the potential adverse impacts the dredging operations could have on the migration of the fish. Therefore, to eliminate the possibility of an adverse impact on these migrating fish, Plan C includes provisions for halting dredging during the period of February to May.

The disposal sites for the NED plan include disposal areas E, F, G, and H. The disposal sites for the EQ plan include the ocean disposal site, the beach nourishment site, and disposal area C. In comparing the disposal sites of each plan, consideration must be given to the impacts associated with using each site and the cost of using each site. Based on these impacts, the disposal sites were analyzed to determine those sites which would provide an optimum level of beneficial contributions while minimizing the costs. Since the disposal sites for the NED plan represent the least costly methods of disposal, and since the disposal sites for the EQ plan provide the most beneficial contributions, the sites for each plan must be compared with the necessary "trade-offs" being performed in order to select the sites for Plan C.

The ocean disposal site provides some beneficial contributions in terms of creating fish habitat. When compared to disposal area H, the ocean site has substantially less adverse impacts and more beneficial impacts than the forested area at site H. Similarly, the beneficial contributions associated with the beach nourishment site and Area C justify their use instead of the use of Area H. Therefore, Area H was rejected for inclusion in Plan C.

When comparing the use of the ocean disposal site with the use of Area E, the temporary loss of farmland at Area E does not represent significant adverse impacts on the area as a whole. The increased cost of using the ocean site cannot be justified in order to obtain the limited benefits associated with using that site. Therefore, it was rejected for inclusion in Plan C.

In comparing Area E to the beach nourishment site, the beneficial impacts of the beach nourishment justify a "trade-off" between Area E and the beach site. However, since the beach nourishment site is part of an existing project, the beneficial impacts associated with using this site can be obtained under the periodic nourishment program at a considerably less cost. Therefore, the beach disposal site was rejected for Plan C.

In comparing Area E to the disposal site at Area C, it should be noted that the beneficial impacts of using Area C can be obtained for only a small increase in cost over Area E. In order to obtain the beneficial impacts of mosquito control and the reduction of the potential for encephalitis, a "trade-off" can be justified between Areas E and C.

Based on this "trade-off," Area E can be eliminated from consideration for Plan C.

As a result of the above comparisons, disposal areas H and E, the ocean disposal site, and the beach nourishment site were excluded from Plan C. Since the remaining sites, Areas C, F, and G, are needed to adequately handle the disposal of the material, no further "trade-off" analysis was performed between them. Also, since Areas F and G have fewer adverse impacts and cost less, the areas would be chosen over Area E. Areas F and G would also be selected over the ocean disposal site and the beach nourishment site for the reasons given above for Area E. Therefore, Areas F, G, and C are included as the disposal areas for Plan C.

As a result of the "trade-off" analysis conducted above, Plan C consists of widening the Savannah Harbor from 400 to 500 feet wide from Fig Island turning basin to Kings Island turning basin. This widening under Plan C would be accomplished using timed dredging--no dredging from February to May-- and disposal areas F, G, and C. The contributions and impacts of this particular plan are summarized on tables 7 and 15 under Plan C.

SELECTING A PLAN

In the preceding pages, four possible solutions were initially considered in the development of plans to address the problems and needs of the study area. Of the possible solutions, the plan for widening Savannah Harbor was selected as the most responsive to the problems and needs of the area. This plan was then analyzed to develop a plan that maximizes National Economic Development (NED) and a plan that maximizes the enhancement of Environmental Quality (EQ) using the widening as a base condition. Following the assessment of the impacts associated with the NED and EQ plans, an evaluation of the two plans was made to determine the beneficial and adverse contributions of each plan. Based on this evaluation, Plan C was developed in an effort to arrive at an optimum trade-off between the NED and EQ plans.

Tables 7 and 15 provide summaries of the impacts and contributions associated with each plan. In analyzing the tables and the preceding discussion, it becomes apparent that the NED plan represents the most economic means of widening the harbor. However, the plan does fail to make any beneficial contributions to the enhancement of the environment. Also, while the EQ plan does make beneficial contributions to the enhancement of the environment, it does so at the significant expense of the NED account. Plan C represents the trade-off between the NED and EQ plans in order to develop a plan that makes beneficial contributions to the enhancement of the environment but maintains its economic efficiency.

In comparing the three plans and the costs and impacts associated with each, Plan C represents an optimum level of improvement for the harbor by providing beneficial contributions to all of the planning objectives while maintaining a high level of economic efficiency. Therefore, Plan C is designated as the selected plan.

THE SELECTED PLAN

This section describes the plan of improvement selected in the previous section on formulation. An adequate plan description goes beyond a routine discussion of elements in the project plan and structures involved; it identifies all the significant effects of the project or plan, both favorable and unfavorable. In addition, it presents meaningful information on design, construction, and operation and maintenance as required for a reasonable understanding of the technical aspects of the plan.

PLAN DESCRIPTION

The selected plan was determined to be the most responsive and feasible means of accommodating the new generation of vessels calling and planning to call at the Port of Savannah within the scope of the authorized study. The plan provides for modification of the harbor by widening the navigation channel between the present upstream limit of the 500-foot channel (Fig Island turning basin) and the Kings Island turning basin from 400 to 500 feet (approximately river mile 13.3 to 18.9). The proposed widening is shown on figures 2A, 2B, and 2C. This plan would be accomplished by dredging the material in the following manner.

- Reach 1 would be dredged using a pipeline dredge and pumping the 344,000 cubic yards of material to Area C.

- Reach 2 would be dredged with a dragline and the 476,000 cubic yards of material would be hauled to Area F(a).

- Reach 3 would be dredged with a dragline and the 512,000 cubic yards of material would be hauled to Area F(b).

- Reach 4 would be dredged with a pipeline dredge and the 472,000 cubic yards of material would be pumped to Area C.

- Reach 5 would be dredged with a pipeline dredge, with 861,000 cubic yards of the material being pumped to Area G and the remaining 286,000 cubic yards of material being pumped to Area C.

Implementation of the selected plan would involve the dredging and disposal of approximately 2.95 million cubic yards of material. This material would be deposited on three selected disposal areas which would be diked and provided with wasteweirs where the material is to be pumped in. (See Figure 2). Area F(a), a 38-acre tract near the Talmadge Bridge, can take about 8 feet of fill and would hold approximately 485,000 cubic yards

CHANNEL

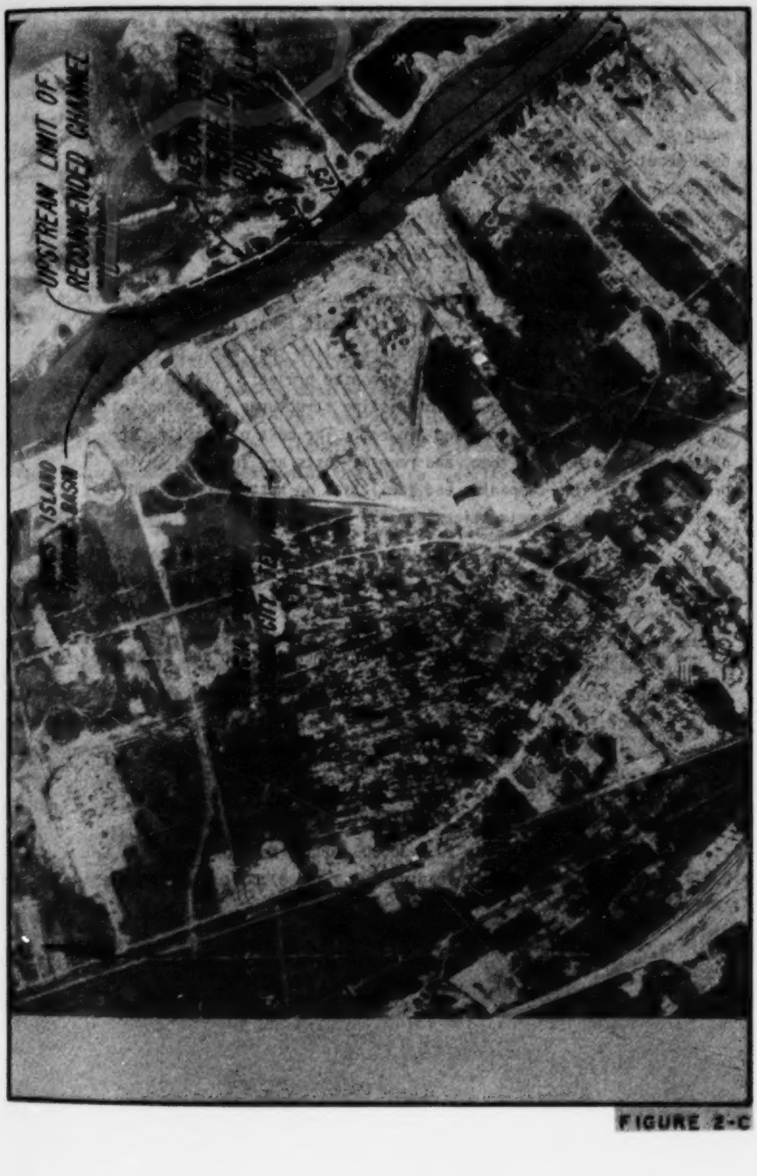


FIGURE 2-C

of material. Area F(b), a 42-acre tract near the bridge, can also take about 8 feet of fill and would hold about 515,000 cubic yards of material. Area G, an 89-acre tract east of the old SCL Railroad Bridge, can hold about 861,000 cubic yards of material. Area C, a 140-acre tract located south of the Fig Island turning basin adjacent to President Street, can hold about 1,125,000 cubic yards of material. These lands are currently available as disposal areas for use by local assurers. The local assurers are aware of their responsibility concerning the furnishing of dikes and wasteweirs for the disposal areas.

There are a number of docks, warehouses, and bulkheads on Hutchinson Island that would have to be removed to permit construction. These could be rebuilt along the new pierhead-bulkhead line that would be established by the project. In the area of the proposed project, all new channel-side construction and major repairs to existing structures are being set back to provide room for the proposed project. The cost of existing structures, damages associated with them, and removal costs are included in the project costs. The companies and facilities on Hutchinson Island that would be involved in relocations consist of:

- The Atlantic Cement Company - about 1,500 square feet of concrete mooring dock and about 2,000 square feet of concrete walkway.

- Charter International - 100 feet of docking slip and severance damage.

- Georgia Kaolin (Mountain Properties, Inc.) -

  West side of slip #3 - 12,000 square feet of concrete and wood docks, 6,700 square feet of concrete loading ramp, 17,400 square feet of wood frame warehouse, and 450 linear feet of railway.

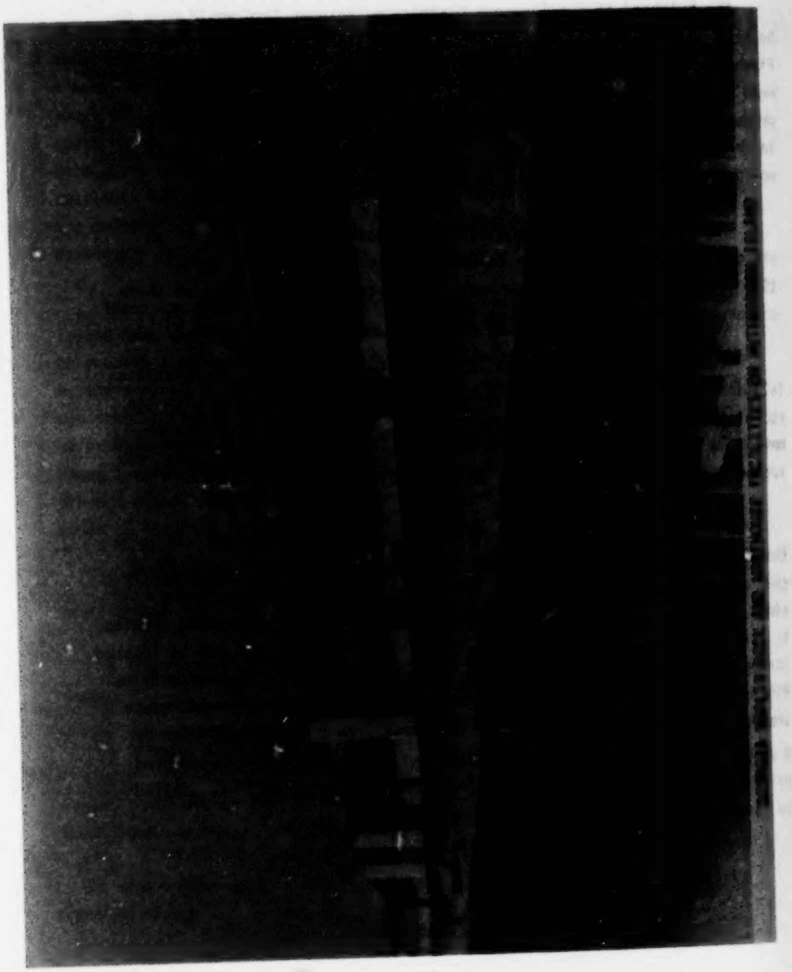
  East side of slip #3 - 36,000 square feet of wood dock, 15,000 square feet of concrete loading ramp, and 87,000 square feet of wood frame warehouse.

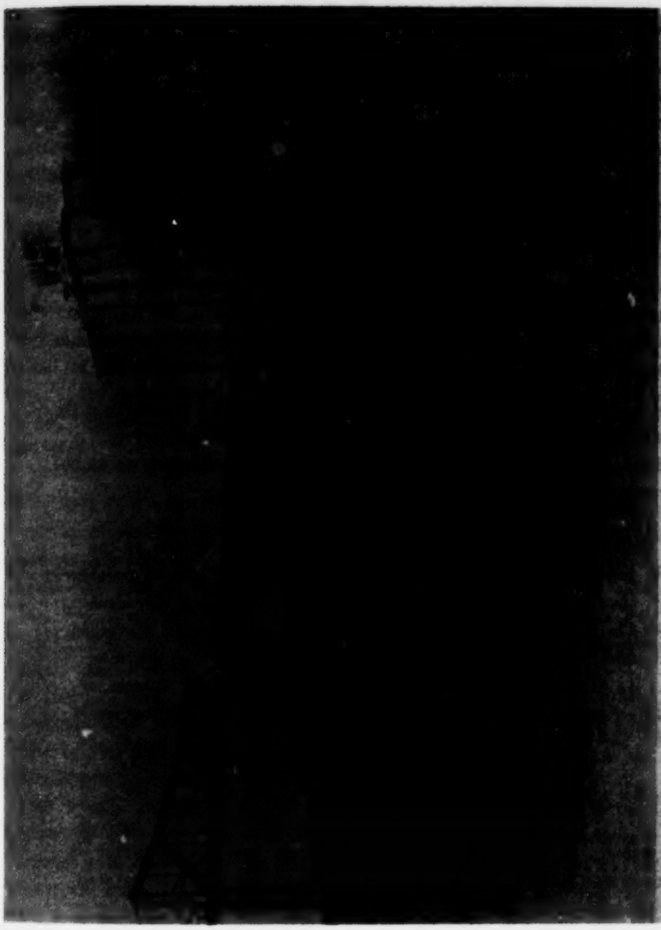
The bulkhead at the Savannah District's Engineer Yard would have to be relocated. However, replacement of the bulkhead is scheduled for Fiscal Year 1977 under the operation and maintenance program. This replacement is scheduled to take into account the necessary setback for the proposed project. For this reason, cost of this replacement is not included in the cost of the selected plan. The marine railway at the Engineer Yard would have to be relocated and is included in the project cost.

There are two cables crossing the navigation channel. One is an electrical cable and one is a telephone cable. These cables supply utilities to the Hutchinson Island area. The costs for modification of these cables are included in the project cost.

A radio transmitter antenna is located near the channel on Hutchinson Island and one of the guy-wires must be relocated. Discussions with the radio station offices indicate that the guy-wire probably could not be moved the necessary distance. Therefore, real estate estimates take into account the necessary relocation of the entire facility.

Currently, there is only one bridge across Savannah Harbor. It is the Eugene Talmadge Memorial Bridge (U.S. Route 17A), a high-level fixed span with a vertical clearance of 136.7 feet at mean high water and a width of 600 feet between piers. However, this 600-foot horizontal opening is not located so that the proposed channel width of 500 feet can be located through the bridge. For this reason, the channel would be widened only to 450 feet through the bridge. This reduction of the widening would reduce the vulnerability of the north pier to damage from a direct collision by a vessel. The Seaboard Coast Line Railroad Bridge piers will be removed prior to implementation of this project. Therefore, no cost was applied to the proposed widening for this item.





ATLANTIC CEMENT FACILITIES ON HUTCHINSON ISLAND

EVALUATED ACCOMPLISHMENTS

Several accomplishments would result from the proposed plan of improvement. Substantial transportation savings would be derived from implementation of the proposed widening plan for the harbor. The transit times experienced by ships utilizing this reach of the harbor would be reduced and the necessity for very strict arrival and departure time control would be lessened. The widened channel would permit increased vessel speeds resulting in reduced in-port operating time and cost and reduced tug assistance. This section of the harbor is very congested and the wider channel would permit safer operation in the harbor. The wider channel would also permit easier maneuvering of vessels into and out of perpendicular slips located within this reach. Transportation savings attributable to the improvement would be $932,000 annually.

Wages paid to unemployed or underemployed labor hired from within the immediate vicinity during construction is credited to the project as redevelopment benefits. Annual redevelopment benefits amounting to $5,000 are estimated to accrue from the project installation.

The land to be used as disposal areas for the construction of the project is zoned for industrial purposes. Although this land is considered high land, most of it is below the elevation of the 100-year hurricane surge. As the dredged material is placed on this land and the elevation is raised above the hurricane surge elevation, the land value would be enhanced. It is estimated that the value of approximately 309 acres of land would be enhanced about $2,500 per acre. The annual enhancement is valued at $49,000.

EFFECTS ON THE ENVIRONMENT

The effects on the environment resulting from the implementation of the proposed navigation improvement to Savannah Harbor would be related to dredging operations and resulting disposal of dredged material.

The proposed plan calls for the dredged material to be placed on disposal areas C, F, and G. The material to be disposed of generally consists of sand, gravel, and silt, with some clay sediment deposits. In reaches 2 and 3, between the Engineer Yard and the Talmadge Bridge, there is a large amount of old piling, debris, and discarded construction materials that would be removed using a dragline. These materials would be placed at the bottom of the fill materials that are to be placed in Areas F(a) and F(b).

Since the disposal of materials in Area F would involve the use of truck dumping, dikes and wasteweirs would not be required. The disposal of material in Areas C and G would involve a pipeline dredge with the material being pumped into the areas. These areas would be diked and provided with wasteweirs to restrict the flow of water out of the disposal area. The proposed disposal areas comprise a total of 309 acres and have a total capacity of about 2,986,000 cubic yards based on the height of fill desired.

Area F(a) comprising 38 acres and F(b) comprising 42 acres were last used as disposal sites about 15 years ago. These areas have revegetated and are now covered with a thick growth of small trees, vines, shrubs, and herbaceous plants. The area has good wildlife habitat for small animals. This area would be filled approximately 8 feet with material dredged from reaches 2 and 3. Area G (89 acres) is located on Hutchinson Island approximately one mile west of the Talmadge Bridge. The area was recently used as a disposal site and is presently covered with herbs and shrubs. This area provides only limited wildlife habitat. The material that would be placed in this site would be dredged from reach 5 with a pipeline dredge and pumped into the area. The depth of fill would be about 6 feet. Area C (140 acres), located about one-half mile south of the Fig Island turning basin, is a low area vegetated with an early successional forest interspersed with open areas of herbaceous plants. The area has been greatly disturbed and suffers from municipal pollution. Due to poor drainage, the area provides a breeding ground for mosquitoes. The area would be filled about 5 feet with sand.

Approximately 27 additional acres of terrestrial habitat would be destroyed by the widening of the channel. This area is located along the northern bank of the channel running most of the length of the widening. Vegetation in this area consists mainly of the types found in disposal areas F and G. Neither this land or any of the disposal areas support tidal marsh.

There are three distinct environmental aspects of dredging in the proposed project area which may lead to possible ecological damages. These are as follow: (1) The destruction of bottom habitats in the dredged area; (2) alteration of habitats due to deposition of dredged material; and (3) water quality impairment of the surrounding waters during the dredging operation.

The effects of the first aspect of dredging listed above cannot be minimized; therefore, once the decision is made to dredge the area, based on social, economic, and environmental considerations prior to the dredging operations, this damage is inevitable. However, the damage to bottom habitats and their benthic communities is temporary.

In areas having soft materials, complete, or nearly complete, removal of benthos is effected by dredging although recovery begins within a month following the dredging operation. Diversity and species composition rapidly return to their pre-dredging levels.

The second possible ecological damage resulting from dredging is the alteration of habitats due to deposition of dredged material. Approximately 2.95 million cubic yards of material would be deposited on three land disposal sites. This deposition would destroy the existing habitat on these areas which comprise about 309 acres. New habitat would be established as the natural revegetation occurs. However, this habitat would be changed to reflect the higher land elevations.

The third environmental aspect of dredging in the proposed project area which may lead to possible ecological damages is the water quality impairment of the surrounding waters during the dredging operation. To evaluate the impact of dredging on the impairment of water quality, chemical analyses and the standard elutriate test were made on sediment and water samples collected in the project area. None of the samples taken in the project area failed the elutriate test in mercury, lead, zinc, or nitrogen after an application of a factor of 10 dilution (actual dilution which would occur during the disposal of dredged material would be far in excess of the tenfold dilution factor employed in the elutriate test). The results of the elutriate test indicate that the discharge of dredged material in the diked areas would not be harmful to man, fish, game, or other beneficial aquatic life.

An increase in suspended solids and in turbidity may be encountered in the immediate vicinity of dredging and may persist for a limited period following termination of dredging activities; however, no significant degradation in water quality is anticipated from these increases. Due to current velocities and the rapid flocculation of suspended material, interference with light penetration and productivity will be limited to the time the dredge is operating and for a brief period thereafter.

Dredging activities should not have any significant adverse impact on the fish and macroinvertebrate populations of the harbor. The nektonic communities, free-swimming large organisms, will temporarily move from the area of disturbance during the dredging period and should rapidly repopulate the area following cessation of dredging activities. Those animals not able to actively escape the dredge will be lost.

Each spring and fall the main Savannah River, Back River, Middle River, and the numerous interconnecting tidal streams are hosts to two anadromous species of commercial and/or sport fishes; namely, shad, and striped bass. Construction and maintenance dredging are not anticipated to have any significant adverse impact upon either the population or spawning habitat of these anadromous species of the Savannah River and its tributaries. The harbor width provides ample swimming area for these anadromous species during dredging operations. However, F&WS and EPA have suggested that no dredging work be performed in the channel during the months of February through May so as not to interfere with the spawning migrations. The proposed plan includes provisions to halt dredging from February to May to reduce the possibility of any interference with the migrations.

The proposed project would have a relatively minor impact on the overall wildlife in the area. No major wildlife resource exists within the disposal areas. The mammals inhabiting the areas are limited in number and include rabbits, raccoons, opossums, and various rat and mice species. As disposal activities are begun in an area, those animals that can escape would move into surrounding areas. Those animals that could not escape would be killed. The animals would repopulate the area with the return of the natural vegetation. It should be noted that each new increment of dredged material re-creates conditions which are ideal for shore birds.

The proposed project is not expected to have any long-term adverse visual or aesthetic impacts. During the time the dredging is conducted, it is conceivable that some adverse visual and aesthetic impacts would occur due to the presence of the dredge and pipelines. However, these impacts would be short-term and they could be considered to be a part of the normal activities associated with a working harbor. After the use of the disposal sites is completed, the visual and aesthetic qualities of the areas would return with the vegetation.

There would be some minor adverse effects on air quality during construction. However, these would be short term. Air emissions from any industrial growth stimulated by the project would be controlled by State and Federal laws.

Few land use changes would result from the installation of the proposed improvement. Parts of the Savannah River and approximately 27 acres of terrestrial land on the northern bank of the river would be converted to channel and channel side slope. The ground elevation of areas used for dredged material disposal would be raised. The areas are zoned for commercial and industrial use.

The proposed project would not adversely affect any existing, proposed or known potential units of the National Park system or any known historic or natural sites eligible or considered potentially eligible for the National Landmark Program.

The ground-water supply in the Savannah area is available from two sources, a relatively shallow ground-water table and a deeper artesian aquifer. The selected plan would not have any impact on either of these sources of ground water.

EFFECTS ON SOCIAL WELL-BEING AND REGIONAL DEVELOPMENT

The effects on social well-being brought about by the proposed widening of Savannah Harbor should be measured in terms of impact on real income; security of life, health, and safety; education, cultural and recreational opportunities; emergency preparedness; and other factors. It is difficult to assess these project impacts quantitatively because of the tremendous time, money, and effort involved in gathering and interpreting data indicative of existing conditions. This effect assessment is, therefore, qualitative in nature.

Real income refers to the purchasing power of individuals and families in a given geographic area. The people of Savannah Harbor's primary area of influence are generally less well off in terms of purchasing power than the people of the State of Georgia as a whole or the United States as a whole. As has been brought out, Savannah Harbor is extremely important as a source of employment and income to the primary area population, since the import and export of source materials and finished products are crucial to much of the area's economic activity. The reduction in vessel transit times anticipated to occur as a result of channel widening can therefore be expected to enhance the purchasing power of primary area residents through the stimulation of increased industrial activity and reduced shipping costs.

Security of life, health, and safety may be measured in terms of crime, mortality, and even accident insurance rates. Numerous studies have been completed by sociologists indicating that crime rates increase with unemployment and that the general health of the populace declines with purchasing power. In the instance of Savannah Harbor, widening of the channel will at least maintain area employment and purchasing power levels and should therefore influence area crime rates and health services positively. The use of disposal area C should reduce the potential for an encephalitis problem in this area. This would have significant benefits on the health of the community. The primary safety impact of harbor widening, however, will be much more apparent in the safer passage, handling, and maneuvering of the larger and larger ships now utilizing and continuing to utilize harbor facilities. Unless widening occurs, conditions will become increasingly hazardous as more and more tonnages move through the harbor in more and larger ships.

Education, like life, health, and safety, may be measured in direct relationship with area purchasing power. The enhancement of area purchasing power by widening should make more funds available in the area for educational facilities and services. As has already been brought out, the City of Savannah is one of the oldest cultural centers in the Nation. The city's existence and growth are directly related to activity in the harbor. Encouragement and enhancement of that activity can only enhance primary area opportunities for education, culture, and recreation.

Other factors indicative of social well-being, such as overall quality of life as exemplified by a sense of community cohesiveness, civic pride, racial prejudice or lack of it, quality of government, etc., would be enhanced by harbor widening to some degree, at least to the extent that local cooperation to bring about widening will accomplish a sense of community cohesiveness.

Modification of Savannah Harbor may be important or even crucial to national emergency preparedness. In the event of natural or wartime emergencies, harbor facilities may be called upon in any number of ways to alleviate hazardous conditions or to aid in movement of men, munitions, and supplies to and from the military installations located in the harbor's primary area of influence.

The effects on regional development brought about by the proposed Savannah Harbor widening project should be measured in terms of the area's income, employment, population, economic base, environment, and social development. Discussion of these indicators in terms of existing and projected conditions throughout this study indicates that the harbor's primary area of influence will experience positive impacts in terms of employment, income, population, economic base (export of locally manufactured goods) activity, and social development. It is concluded that the proposed Savannah Harbor widening project will have positive impacts on social well-being and on regional development within the project's primary area of influence, and even for the Nation as a whole, because of this area's value as a national historical and cultural center.

OTHER EFFECTS

The effects of the proposed plan on shoaling in the harbor were determined indirectly through an analysis of the model study results contained in Technical Report No. 2-580.[1] Based on an increase in the flow area of the Front River channel, shoaling in this area should increase similar to the results indicated in the model studies for increased flow areas. However, since the increase in flow area would be small, the increase in shoaling in the Front River is expected to be small. The effects on total shoaling in the harbor is expected to be negligible.

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[1] Technical Report No. 2-580, Savannah Harbor Investigation and Model Study, Volume III,; H. J. Rhodes & H. B. Simmons, U.S. Army Engineer Waterways Experiment Station, Corps of Engineers; March 1965.

The effects of the proposed plan on flow velocities in the Front River area are also estimated to be inversely proportional to the increase in flow area. Based on model studies of other increases in flow areas, the average velocities should decrease by less than 0.5 feet per second. Downstream of the proposed area of improvement, the effects of the plan on shoaling and flow velocities are expected to be negligible. There should also be no effects on the beach erosion control project located at Savannah Beach or on the lower harbor channel.

DESIGN

In selecting a desirable incremental width for widening the reach of the navigation channel between Fig Island turning basin and Kings Island turning basin, due consideration was given both to public and Federal interests. The channel addition would conform with the existing project. It would have side slopes of 1 vertical to 3 horizontal and a channel depth of 38 feet with 2 feet allowed for overdepth dredging.

In Savannah Harbor, the primary design criteria used to establish an adequate channel width was the requirement for single lane or double lane traffic. Due to the size of some of the container vessels now calling at the port, initial consideration was given to the adequacy of a single lane channel to accommodate these larger vessels. The design ship for the single lane channel was taken as a typical container ship of the MARU class with a length of 863 feet, a beam of 105 feet, and a draft of 38 feet.

Consideration was also given to the requirements of two-way traffic or a double lane channel. Since there is a large number of smaller vessels that call at the port, provisions for two-way traffic for these vessels reduces in-port time and increases efficiency. The design vessel for the double lane channel was taken as a typical cargo ship with a length of 550 feet, a beam of 75 feet, and a draft of 32 feet.

Using the procedures outlined Section E of Appendix 1, the design channel widths shown in table 8 were obtained. Provision of a 500-foot-wide channel would therefore satisfy both of the design criteria used for single and double lane traffic. It should be noted that for double lane traffic with a draft of 32 feet there would actually be more channel width available by utilizing the side slope area up to the 32-foot level where adjoining berthing areas did not interfere.
(500=2x3(slope)x6(depth)=536)

TABLE 8
CHANNEL WIDTH

	Width			
Channel type	Maneuver lane (ft.)	Ship clearance lane (ft.)	Bank clearance lane (ft.)	Total (ft.)
Single lane	189	--	158	505
Double lane	135	100	75	520

The lower 13 miles of the navigation channel from the Atlantic Ocean to Fig Island turning basin have an authorized minimum width of 500 feet. The 100-foot reduction in width within the inner harbor is not consistent with design of other similar ports within the Southeast. A review of channel and harbor dimensions for other major southeastern ports indicates that inner harbor areas generally provide navigational maneuver areas of greater width than 500 feet. These wider areas are observed in several ports with approach or bay channels with widths of 400 feet or less. This study of similar waterway characteristics as recommended in EM 1110-2-1607 provides further basis for providing additional width within the reach of Savannah Harbor between Fig Island and Kings Island turning basins.

The material which would be dredged from the channel widening contains no rock. It consists of silt, soft blue clay, gravel, and coarse to fine sand. There is some hard material in the vicinity of the Kings Island turning basin; however, it can be removed by a pipeline dredge without blasting. The hard material in the area is composed of fat silt, sand, silty sand, hard clay, and fine sand and mica.

CONSTRUCTION

If the proposed widening project for Savannah Harbor is authorized, it is estimated that the design and construction of the modification could be completed within several years. Widening the Savannah Harbor in accordance with the proposed plan of improvement would involve the loss of about 27 acres of land from along the northern bank, shoreward from the present low waterline. In addition, there are a number of docks, warehouses, and bulkheads which would need to be removed. A pipeline dredge would be utilized to widen the reach from the Talmadge Bridge to the Kings Island turning basin and from the Fig Island turning basin to the Engineer Yard. Since the material to be dredged is soft, no blasting would be required. Dredged material would be pumped to two of the disposal sites, G and C. The reach from the Engineer Yard to the Talmadge Bridge would be constructed using a dragline, and the material would be hauled to Area F. This type of construction is considered appropriate because of the difficulty expected in removal of debris and piling located along this area.

An overdepth of 2 feet would be allowed to account for dredging inaccuracies.

The timing and dredging techniques would be coordinated with appropriate Federal and State agencies to minimize adverse effects on the environment. No dredging would be performed from February to May.

OPERATION AND MAINTENANCE

It is anticipated that widening the harbor would cause no appreciable increase in the amount of total shoaling in Savannah Harbor. Savannah Harbor, for all practical purposes, is a closed system with an average annual sedimentation rate of approximately 8.1 million cubic yards, based on past records. Sediment is transferred into the harbor from upstream Savannah River flows, from the ocean on the floodtide, and from the surrounding peripheral areas. Widening Savannah Harbor as proposed would not produce any significant effect on the inflow of material. Therefore, the overall shoaling in the harbor should not be significantly affected. Accordingly, additional maintenance required, if any, should not be significant.

ECONOMICS OF SELECTED PLAN

The purpose of this section is to centralize the economic aspects of the selected plan, costs as well as benefits. The material presented in the following pages concerns only those facets of the proposed improvement which can be quantified in dollar values.

METHODOLOGY

The tangible economic justification of the proposed improvements can be ascertained by comparing the equivalent average annual charges (i.e., interest, amortization, and maintenance costs) with an estimate of the equivalent average annual benefits which probably would be realized over the 50-year period of analysis selected. The average annual benefits preferably should equal or exceed the annual costs if the Federal Government is to contribute toward the project. An interest rate of 6-3/8 percent applicable to public projects was used in this report.

COSTS

The summary of estimated first costs of the recommended plan for modification of the harbor is shown in table 9. Quantities of dredged material and other principal construction items needed for the selected plan were estimated on the basis of preliminary designs. Location of the navigation aids would be implemented by the U.S. Coast Guard. The estimates of first costs are based on July 1976 price levels for comparable type construction. The project estimates include a 15 percent contingency factor, an 8 percent engineering and design factor, and a 6 percent supervision and administration cost factor. The present fair market value of the existing properties and improvements affected by the project and the cost of their removal was determined. These costs were used in the economic analysis and in the determination of the total Federal and non-Federal cost.

TABLE 9
SAVANNAH HARBOR
SUMMARY OF ESTIMATED FIRST COST

Feature		Cost
Dredging		
Reach 1 - Disposal Area C		
344,000 C.Y. @ $1.50/C.Y.		$516,000
Reach 2 - Disposal Area F(a)		
476,000 C.Y. @ $2.05/C.Y.		976,000
Reach 3 - Disposal Area F(b)		
512,000 C.Y. @ $1.40 /C.Y.		717,000
Reach 4 - Disposal Area C		
472,000 C.Y. @ $2.50/C.Y.		1,180,000
Reach 5 - Disposal Area C		
286,000 C.Y. @ $2.50/C.Y.		715,000
Reach 5 - Disposal Area G		
861,000 C.Y. @ $1/C.Y.		861,000
Subtotal		$4,965,000
Additional Mobilization and Demobilization		100,000
Subtotal		$5,065,000
Contingencies (15%)		760,000
Subtotal		$5,825,000
Engineering and Design (8%)		466,000
Supervision and Administration (6%)		350,000
Total Dredging Cost		$6,641,000
Navigation Aids		$20,000
Relocations		
Marine Railway at Engineer Yard	$102,000	
Electric Submarine Cable	15,000	
Telephone Submarine Cable	6,000	$123,000
Clearing and Removal of Improvements		$151,000
Lands and Damages		
Land 27 Acres @ $12,000/Acre		$324,000
Improvements		
Atlantic Cement Company	$60,000	
WEAS Radio Tower	120,000	
Charter International	325,000	
Georgia Kaolin		
West Side of Slip #3	360,000	
East Side of Slip #3	1,185,000	$2,050,000
Contingencies (20%)		475,000
Acquisition Cost (15 Tracts @ $3,000/Tract)		45,000
Total Lands and Damages		$2,894,000

TABLE 9 —Continued

Feature	Cost
Disposal Areas	
Easements for Disposal Areas	$371,000
Dikes and Wasteweirs	145,000
Total Disposal Areas	$516,000
Total Estimated First Cost	$10,345,000

Estimates of annual charges are based on an economic life of 50 years. Since it is estimated that the proposed construction operations could be completed in less than 2 years, no interest during construction was included with the estimate of first cost. An interest rate of 6-3/8 percent and an amortization period of 50 years were used in computing the annual charges for the project, as shown in table 10. No appreciable increase is expected in the total annual maintenance requirements of the harbor due to the widening. Therefore, no annual maintenance charges were included in the estimate of annual charges.

TABLE 10
SAVANNAH HARBOR
ANNUAL CHARGES

Feature	Amount
Total investment cost	$10,345,000
Interest and amortization (.066789)	691,000
Annual maintenance	0
Total estimated annual charges	$ 691,000

BENEFITS

This section presents a derivation of benefits for the purpose of gaging the economic feasibility of the proposed modification of Savannah Harbor from a width of 400 feet to a width of 500 feet between Fig Island turning basin and Kings Island turning basin.

The first step in calculating the costs related to vessel speeds and tug assistance required for vessels calling at Savannah Harbor involved the calculation of future fleets by vessel type. This was done through careful consideration of world fleet projections, Savannah Harbor dimension limitations, and potential tonnages. After projection of the Savannah Harbor fleet to the year 2030, it was necessary to identify that portion of the fleet affected by the proposed widening project. It was deduced from 1975 fleet data that 98 percent of general cargo and container vessels, 87 percent dry bulk vessels, and 89 percent of liquid bulk vessels entered the affected portion of the harbor. These percentages were applied to total harbor fleets by vessel type to derive appropriate affected fleets. The composition of the present and future fleets for Savannah Harbor are shown in Section B of Appendix 1.

Benefits were calculated based on existing and potential vessel speeds and associated tug costs. These benefits were derived in terms of the reduction in operating time and tug assistance time required while the vessel is traversing the portion of the harbor that is under study. The proposed widening would allow for an increase in vessel speed which would result in an overall reduction in the time required for the vessel to traverse that portion of the harbor. By associating this time saving with an hourly operating cost the resulting reduction in vessel operating cost can be determined.

The computation of the estimated transportation savings is shown on Tables F-3, F-4, and F-5 of Appendix 1. The computations are based on the assumption that smaller vessels which enter Savannah Harbor can turn around at Marsh Island turning basin while the larger vessels must turn at Kings Island turning basin. The division of vessels based on where they turn is denoted on the computation tables by the classification of "long distance" and "short distance" with the first notation representing the trip to Kings Island Turning Basin and the latter representing the trip to Marsh Island Turning Basin. There are some vessels that must turn at Kings Island Turning Basin due to their docking location rather than their size. Vessels are not permitted to back up in the narrow river channel; therefore, they must travel upstream until they reach a turning basin. These vessels are also noted in the table of Section F.

The savings thus derived are based on the increased vessel speeds and the reduced tug assistance. For vessels traveling the short distance (Marsh Island Turning Basin) the savings are based on a reduction in transit time of 31 minutes for the vessel and its attending tugs (average 1.5 tugs per vessel). For vessels traveling the long distance (Kings Island Turning Basin), the savings are based on a reduction in transit time of 42 minutes for the vessel and its attending tugs (average 2 tugs per vessel).

These reductions in vessel transit times are based on an increase in vessel speed of two knots for the "with" versus the "without" project conditions. These times and related two-knot speed differentials were derived after discussion with representatives of the Savannah Pilots Association, the St. Johns Bar Pilots Association, the Jacksonville District Corps of Engineers, and the Atlantic Towing Company. The Atlantic Towing Company was the source of the average hourly tug operating cost of $100. Other hourly vessel operating costs were derived from data and trends furnished by the Office, Chief of Engineers, Washington, DC. The one-way distance which must be travelled by smaller vessels turning at Marsh Island is 3.62 nautical miles, which covers the vessel trip within the confines of the 400' foot channel. The total one-way distance travelled to Kings Island Turning Basin is 4.94 nautical miles. Total resulting delay costs by vessel type for 1980, 1990, 2000, 2010, 2020, and 2030 are shown in table 11. As indicated in Table 11, potential benefits from the existing (1980) need for widening in Savannah Harbor are calculated at $670,000. Future potential benefits from widening, discounted at 6-3/8 percent in 10-year increments, are calculated to be an average annual equivalent of $262,000. Total average annual transportation benefits are estimated to be $932,000.

TABLE 11
POTENTIAL TRANSPORTATION BENEFITS BY VESSEL TYPE
VESSELS AFFECTED BY WIDENING
1975 through 2030

	TANKERS	DRY BULK	GENERAL CARGO	TOTAL TRANSPORTATION BENEFITS
1975	$ 93,339	$58,400	$438,161	$589,900
1980	114,607	88,339	467,128	670,074
1990	150,981	118,627	563,999	833,607
2000	145,779	151,953	727,649	1,025,381
2010	140,225	194,061	882,332	1,216,608
2020	138,073	245,513	1,096,802	1,480,388
2030	136,957	312,121	1,352,328	1,801,406

Source: Appendix 1, Section F

It is estimated that the contractor hired to widen the channel would bring with him all of the labor needed to construct the project with the exception of 20 percent of the unskilled labor which would be hired locally. It is estimated these local hires would come from surrounding counties within a 50-mile radius of the project. There are eight counties so located which are designated as Redevelopment Counties under Section 401(a) of Public Law 89-136. These Counties are: Bryan, Effingham, Evans, Long, McIntosh, and Screven in Georgia, and Hampton and Jasper in South Carolina.

The total redevelopment benefits attributable to the locally hired workers during the 1-year construction period would be $72,766. These total redevelopment benefits discounted at 6-3/8 percent for a 50-year period ($72,766 X .066789) give an average annual redevelopment benefit of $4,900.

Placement of dredge disposal material on the two areas on Hutchinson Island and on Area C would enhance the value of the lands for industrial purposes. The average value of the land is $9,500 per acre. Therefore, it is estimated that the value of the 309 acres will increase $2,500 per acre on an average, thus giving a total enhancement value of $773,000. The cost of fill required to raise this area from an average of 8.5 feet msl to 11 feet msl is $1,246,000. In accordance with EM 1120-2-101, the lesser of these two values is used to compute enhancement benefits and associated cost-sharing information. The total enhancement value of $773,000 would have an annual value of $49,000. Table 12 provides a summary of the average annual benefits.

TABLE 12
SUMMARY OF BENEFITS

ITEM	AMOUNT
Transportation Savings	$932,000
Existing (1980) - $670,000	
Future - $262,000	
Redevelopment	5,000
Enhancement	49,000
Total Annual Benefits	$986,000

JUSTIFICATION

The proposed improvement would stimulate industrial growth of the area by reducing the shipping transportation costs. The most significant regional effects would relate to this aspect of the improvement. As previously discussed, much of the regional economy is dependent on the port facilities. Lower in-port vessel operating costs would permit the harbor complex to expand and increase its waterborne commerce tonnages. New industries and their related waterborne commerce requirements would generate employment, wages, salaries, profits, and tax revenues for the entire region as well as areas outside of the immediate region. The proposed project would allow for more efficient operation of those vessels presently calling at the port and increase the safety margin for those vessels.

The estimated annual charges, the estimated annual benefits, and the ratio of benefits to charges, which are summarized in Table 13, indicate that the recommended plan to widen the navigation channel between Fig Island Turning Basin and Kings Island Turning Basin from 400 to 500 feet is economically justified.

TABLE 13
SUMMARY OF ECONOMIC ANALYSIS
RECOMMENDED PLAN

Feature	Amount		
	Existing (1980)	Future	Total
Average Annual Benefits	$724,000	$262,000	$986,000
Annual Charges	691,000	---	691,000
Economic Ratio (benefit/cost)	1.05	---	1.43

DIVISION OF PLAN RESPONSIBILITIES

The purpose of this section is to present the division of responsibilities between Federal and non-Federal interests in connection with development of the proposed project. The procedures follow the guidelines established for local cooperation in general navigation projects.

FEDERAL RESPONSIBILITIES

After Congressional authorization and funding, the United States will design and prepare detailed plans for the proposed project. After receipt of required non-Federal share of the construction costs, the United States will then dredge and maintain the proposed channels and provide and maintain necessary aids to navigation.

The presently estimated Federal share of the total first cost for the considered improvement is $6,646,000. Since no increase in total maintenance of Savannah Harbor is anticipated, no maintenance costs are charged to the proposed widening project.

NON-FEDERAL RESPONSIBILITIES

Non-Federal interests must fulfill the following responsibilities:

a. Convey without cost to the United States all lands, easements, and rights-of-way necessary for the construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of spoil and including necessary retaining dikes, wasteweirs, bulkheads, and embankments therefor, or the costs of such retaining works, all at a presently estimated cost of $3,410,000.

b. Accomplish without cost to the United States all alterations and relocations of buildings, transportation facilities (excluding railroad, combined highway and railroad, and publicly owned highway bridges and approaches thereto), storm drains, utilities, and other structures and improvements made necessary by the construction, at a presently estimated cost of $123,000.

c. Fulfill the requirements of non-Federal cooperation as specified in the Uniform Relocation Assistance and Real Property Acquisition policies Act of 1970 (Public Law 91-646) approved 2 January 1971.

d. Provide a cash contribution for the general navigation facilities equal to 50 percent of the final construction cost allocated to land enhancement resulting from landfill exclusive of lands, easements, rights-of-way, alterations, and relocations presently estimated at $166,000.

e. Hold and save the United States free from damages due to the construction works other than damages due to the fault or negligence of the United States or its contractors.

f. Provide and maintain without cost to the United States adequate public terminal and transfer facilities open to all on equal terms.

g. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the public terminals and transfer facilities commensurate with the depths provided in the related project areas.

h. Prohibit the erection of any structures within 125 feet of the bottom edge of the proposed channel widening.

The total non-Federal first cust is presently estimated at $3,699,000. These costs are shown in detail in table G-2 of Appendix 1.

Chatham County serves as local assurer for the current project and they have presented a letter (see Appendix 2) stating their intent to fulfill the requirements of local cooperation for the proposed project. Chatham County is a public body capable of meeting the requirements of Section 221 of Public Law 91-611.

PLAN IMPLEMENTATION

A brief description of the steps that would be necessary to implement the plan of improvement for modification of Savannah Harbor, as proposed herein, can be summarized as follows:

The report would be reviewed by Corps of Engineers South Atlantic Division, the Board of Engineers for Rivers and Harbors, and the Office of the Chief of Engineers. The Chief of Engineers would transmit the report to the Governor of Georgia and other interested Federal agencies for formal review and comment. Following the above State and interagency review, the final report of the Chief of Engineers would be forwarded to the Secretary of the Army. The Secretary of the Army would obtain the views and comments of the Office of Management and Budget and transmit the report to Congress.

The Committees on Public Works of the House and Senate would hold hearings on the report with a view toward formulating a bill including authorization of the recommended project. If the project is authorized, the District Engineer would reaffirm the local cooperation and request funds for advanced studies through normal budget procedures. When funds are appropriated for the project, advanced engineering and design studies, Phase I General Design Memorandum (GDM), would be accomplished. These studies would review and update the basic plan that was authorized and would make necessary design changes. This study would also include complete coordination with affected State and Federal agencies and with local interests. A public meeting would be held as a part of the coordination. If changes in the basic plan authorized are substantial, a draft EIS is also prepared and circulated for comments. A final EIS would subsequently be prepared and filed.

After completion of Phase I studies, detailed design to produce construction plans and specifications along with detailed cost estimates would be accomplished. At this time, the formal agreements of local cooperation required by law would be provided by local interests and approved by the Secretary of the Army. Upon completion of detailed construction plans and specifications, bids would be invited and contracts awarded.

It is not possible to forecast the exact time frame for the completion of the above steps. However, once the improvements are authorized and initially funded, it would be possible to complete the design and construction within several years, if subsequent appropriations were provided as required.

VIEWS OF NON-FEDERAL INTERESTS

As previously discussed, several public meetings were held during the course of the study in order to obtain local interests' views which were used for guidance in formulating the plan of improvement for modification of the harbor.

Throughout the course of the study, close coordination was maintained with the Savannah Port Authority, Georgia Ports Authority, and the Chatham County Commissioners. Numerous workshops were held with these groups in order to keep them informed of the study problems, the likely impacts, and the responsibilities which would be associated with pursuing each element of the planning objectives. In addition, the recommended plan was coordinated with the Georgia Department of National Resources, the Georgia Department of Community Development, Ogeechee Chapter of the Audubon Society, and the Coastal Plains Chapter of the Georgia Conservancy.

Letters expressing views concerning the recommended plan of improvement for modification of the existing project have been received from various interested parties and are displayed in appendix 2. Also included in the display is a letter received from the Chatham County Commissioners who act in behalf of Chatham County which is the local assurer. The letter expresses the Commissioners' support of the recommended project and states their intention of fulfilling the requirements of local cooperation.

REVIEW BY OTHER FEDERAL AGENCIES

The proposed plan of improvement was coordinated with the following Federal agencies:

U.S. Coast Guard
Environmental Protection Agency
Fish and Wildlife Service
National Park Service
National Marine Fisheries Service
Department of Housing and Urban Development

The comments received from some of the above agencies are contained in Appendix 2.

The U.S. Coast Guard's comments concerning the possibility of widening the channel 50 feet on the west side of the channel near the Talmadge Bridge were analyzed. Due to the existing development along this side of the river, this widening was found to be impractical. Therefore, the bridge lights would have to be realigned to mark the new channel center.

Comments made by the Environmental Protection Agency were considered in the selection of dredged material disposal sites. New areas for disposal are included in the selected plan. Areas presently being used for maintenance dredging were not included in any proposals. Ocean dumping was analyzed in formulation; however, it was not included in the recommended plan due to the high cost involved.

Comments made by the National Park Service concerning an archeological survey are being taken care of in a survey that is presently under contract. The results of this survey will be published as an addendum to the Environmental Impact Statement (EIS).

Other comments by these and other agencies were reserved pending publication of the draft EIS. These comments will be handled in the revised draft EIS.

SUMMARY

Savannah Harbor plays a vital role in stimulating the industrial growth and economic progress of the Savannah area and the State of Georgia. Job opportunities in port-related industries, access to sources of raw material via economical water transportation, and transportation for finished products enhance the growth of the region as well as the Nation.

The ability of the harbor to continue to provide an economic stimulus to the Savannah and tributary area depends on its ability to accommodate those vessels calling and planning to call at the port. In-port operating expenses must be held to a minimum in order to hold down shipping costs. Not only must new techniques to handle, store, and distribute commodities be utilized, the harbor navigation facilities must be expanded to reduce vessel operating costs through a reduction in vessel transit time.

Within the scope of the authorized study, these navigation problems were analyzed to determine the needs of the area with respect to navigation, Using the guidelines set forth in P & S, possible solutions to the problems and needs of the area were determined. Following a detailed analysis of these possible solutions with respect to the planning objectives and the impacts on NED, EQ, RD, and SWB, widening of the existing channel was selected as the best solution to the problems and needs of the study area.

Considering the width of the lower harbor channel (500 feet), the study authorization, and the design criteria for channel width, it was concluded that the most feasible plan for widening the harbor consists of widening that section of the navigation channel between Fig Island turning basin and Kings Island turning basin from 400 to 500 feet on the northern side of the channel.

Utilizing the 500-foot widening as a base condition, NED and EQ plans were developed in detail for further analysis. The methods and timing of construction and material disposal were selected to maximize the increase in the Nation's output and efficiency for the NED plan and to maximize the enhancement of the environment for the EQ plan. These plans were then analyzed and compared to arrive at an optimum plan for improvement.

In the recommended plan, dredging would be halted during the period February to May to prevent possible interference with fish migrations, and the dredged material would be disposed of in the three land disposal sites shown on plate 2. Two of the land disposal sites, where material would be pumped, would be diked and would have wasteweirs to control the flow from those areas. The other site would not require diking since the material would be hauled in and dumped.

Widening on the north side of the river would necessitate the relocation of those facilities along that portion of the river. The facilities involved are located mainly between Fig Island turning basin and the Talmadge Bridge. The widening would also require approximately 27 acres of shoreline land as part of the construction right-of-way and 309 acres of land for material disposal.

Implementation of the proposed project would be initiated by the United States Government after Congressional authorization and funding and after receipt of the non-Federal share of the construction cost. The Federal share of the proposed project's construction cost is presently estimated at $6,646,000, while the non-Federal share is estimated at $3,699,000. Following approval of the Phase I GDM and recoordination of the environmental issues during the presonstruction planning stage, it would be possible to prepare detailed plans and specifications for the proposed harbor modification and construct the project within several years, provided the necessary funds are made available.

Following construction of the proposed widening project, the Federal Government would provide for its maintenance as part of the overall harbor maintenance program. However, no significant additional harbor maintenance is expected to result from this widening.

The selected widening plan for the harbor is acceptable to local interests. Assurance of non-Federal participation in the recommended plan of improvement is indicated in a letter of intent from the Chairman of the

Chatham County Commissioners. A copy of the letter is contained in Appendix 2.

A summary of the economic data for the proposed plan is shown below in Table 14.

TABLE 14
SUMMARY OF ECONOMIC DATA

Item	Total First Cost	Annual Charges	Average Annual Benefits	B/C
Proposed Plan	$10,345,000	$691,000	$986,000	1.43

EFFECT ASSESSMENT

The recommended plan was analyzed to determine possible impacts that might occur, as well as impacts that would definitely occur, as a result of plan implementation. The impacts generated by the implementation of the recommended plan are described below.

The main economic effects of the recommended plan are related to the costs associated with construction and the benefits associated with the transportation savings. NED would be adversely affected by the cost of construction and relocation. However, as indicated by a B/C ratio of 1.43 to 1, the beneficial effects resulting from transportation savings generated by reduced vessel transit times would significantly outweigh the costs involved. Local government finance would be similarly affected, with the beneficial effects of the transportation savings outweighing the adverse effects of the project costs.

Tax revenues would be adversely affected by the loss of 27 acres of industrial land on Hutchinson Island. This would be offset, somewhat, by increased property values of disposal areas. Other property values in the study area would not be significantly affected, although some minor beneficial impacts could be expected due to the improved harbor facilities.

Land use in the study area should not be appreciably affected except for the 27 acres of shoreline on Hutchinson Island that would be taken by the widening and removed from the private sector. Public facilities and services in the area should not be significantly affected. Those facilities that would require relocation would be adversely affected.

Local and regional growth would not be significantly affected, although there might be some minor beneficial effects related to the improved economic conditions. The relocation of the facilities on Hutchinson Island would adversely affect those facilities. Real income distribution, employment, and business and industrial activity would not be significantly affected by this plan. There would be some minor beneficial effects associated with the reduced shipping costs enhancing industrial activity. However, these effects could easily be overshadowed by other economic conditions.

Agricultural activity in the area would not be significantly affected by the plan. The effects of the plan on national defense would be minor.

The main environmental effects of the proposed plan would result from the dredging and disposal of material. The manmade resources on Hutchinson Island that would require relocation would be adversely affected. Although the dredging activity would temporarily have adverse effects on the navigation facilities in the harbor by increasing congestion, widening the channel would significantly improve the harbor facilities. Also, increasing the elevation of the disposal areas would enhance their potential for use as industrial sites.

The natural resources of the study area would not be significantly affected by the plan. The resources located on the strip of land to be dredged by the widening would be lost. However, there are no known major resources in that area. The proposed plan would not have any significant adverse effects on air pollution in the study area. There would be some pollution generated by the construction activity, but this would be temporary.

Adverse impacts on water pollution would be generated by the dredging and disposal activities. The dredging activity would increase water turbidity through the suspension of solids in the water column. Also, the heavy metals and organic materials trapped in the bottom sediments would be released into the water column. At the disposal sites, dikes and waste-weirs would be used to control the release of waters from hydraulic, or pipeline, dredging. In all, the impacts on water pollution would be significant in the area of dredging and disposal; however, the impacts would be confined and generally temporary. The impacts on land pollution would be mainly negligible.

The animals and birds living in the harbor area would be adversely affected by the construction activities. Those larger animals and birds that could escape the construction would do so and move into surrounding areas. The other animals that could not escape would be destroyed.

Marine life would be adversely affected by the dredging activities. The larger, free-swimming species would move out of the area. The less mobile species would be destroyed; however, this destruction should be confined to the immediate construction area. The bottom biota would also be destroyed in the immediate vicinity of the dredging. Migrating fish, striped bass and shad, should not be affected since dredging activities would be halted during the migration period.

Existing plantlife in the construction and disposal areas would be destroyed. The wildlife habitat associated with these areas would be destroyed. However, as the area revegetates the habitat would return. Destroyed with the plantlife and existing wildlife habitat would be the ecosystems and food chains present in the areas. These would also re-establish themselves with the natural revegetation.

The impacts of the recommended plan on the physical and hydrologic aspects of the area should be mainly negligible. Erosion along the channel should be reduced slightly due to the lower velocities. Sedimentation along the widened channel should increase slightly; however, the overall effect on the harbor sedimentation rate should be negligible. The groundwater of the area should not be affected and the tidal flows should not be appreciably affected.

The significant social effects of the recommended plan would result from the beneficial impacts of the plan on the economy of the area or from the construction activity and disposal of material. The noise associated with the construction activity would generate a temporary adverse effect on the harbor area. This effect would cease following completion of construction. The construction and disposal activities would also generate temporary adverse esthetic impacts. These would also diminish with time following completion of construction and disposal activities.

The population of the area would not be significantly affected by the plan. The mobility and density would not be affected and there would be no displacement of people involved. There would also be no significant effect on housing in the area. Transportation in the study area would only be affected by the improved navigation facilities of the harbor. Other facilities would not be affected by the plan.

Educational, recreational, and cultural opportunities would benefit from the improved economic conditions of the study area. These benefits would generally be minor. Community cohesion, community growth, and institutional relationships would be beneficially affected by the improved economic conditions and the cooperation required to accomplish the project. These benefits would be generally minor.

Archeological and historical sites should not be affected by this plan. As previously stated, a study is under contract and the results will be supplied as an addendum to this report. The health conditions of the area could be significantly improved by the plan through the reduction of the mosquito problem and potential source of encephalitis at Area C. The disposal of material in Area C would eliminate a major breeding ground for mosquitos, and one that is subject to municipal pollution.

STATEMENT OF FINDINGS

The selected plan for modification of Savannah Harbor, Georgia, reflects a combination of Corps' planning and public involvement. Information was obtained from Federal, State, and local officials regarding problem identification, planning objectives, formulation of alternatives, and evaluation of impacts of the various alternatives considered for formulation of the selected navigation plan for modification of the harbor.

The possible consequences of all reasonable alternatives have been studied and evaluated according to engineering feasibility, environmental quality, social well-being, and economic factors including regional and national development. The study has been conducted according to criteria set forth by Principles and Standards.

Pertinent considerations in the selection of the plan of improvement for Savannah Harbor, Georgia, were as follow:

a. Engineering considerations - Of the four possible solutions considered, widening the existing channel from Fig Island turning basin to Kings Island turning basin is the most responsive to the problems and needs of the study area. The "no development" alternative fails to reduce traffic congestion in the harbor or improve the navigation conditions experienced. The plan for formally programing harbor traffic would have little effect on the existing problems of traffic congestion or improving navigation conditions. The "barge lane" alternative fails to alleviate traffic congestion or improve navigation conditions significantly. The widening would allow for increased vessel operating speeds and more room to maneuver in docking and undocking procedures. The widening would involve increasing the width of the navigation channel from 400 to 500 feet. The 500-foot width is based on design criteria presented in section E of Appendix 1 and consideration of the 500-foot width presently available in the lower 13 miles of channel. The 100-foot widening would be done on the northern side of the channel to minimize relocations. The new harbor line would be established approximately 125 feet from the edge of the new channel. The widened portion would have the same depth as the existing channel (38 feet), 1 vertical to 3 horizontal side slopes, and would be about 5.6 miles long.

b. Environmental considerations - About 2.95 million cubic yards of material would be dredged to provide the wider channel. Three land disposal sites have been proposed for disposal of the material to be removed. The land disposal areas would be diked and provided with wasteweirs where the material would be pumped in. Approximately 27 acres of riverbank would be lost due to the widening. All vegetation on the 309 acres proposed as disposal sites would be destroyed. The benthic communities and biota located on the river bottom in the dredging area would be destroyed.

There would also be a temporary increase in the turbidity of the water. Free-swimming organisms would temporarily avoid the dredging areas, and some wildlife would temporarily be displaced from the disposal areas. Those species that could not escape would be destroyed.

c. Economic considerations - The proposed plan reduces vessel transit times and operating costs resulting in transportation savings to shippers and industry. These savings would eventually be passed on to the consumers thereby benefiting much of the tributary area. The construction costs associated with the widening are outweighed by the benefits generated. Therefore, the net effect on NED is positive.

d. Social well-being considerations - The proposed plan would have beneficial impacts on the economy and employment of the tributary area. Increased employment and income resulting, either directly or indirectly, from the proposed plan would have positive impacts on the people living in the tributary area. The reduction of the mosquito problem and encephalitis potential at Area C has potentially significant favorable impacts on the health and safety of the people of the area.

In accordance with guidelines provided in the Water Resources Council's Principles and Standards, project plans were developed which would maximize the National Economic Development account and the Environmental Quality account. It was found that the main differences in the plans would be in the disposal plans utilized and in the timing of the construction work. Analysis of the two plans produced the summary comparison of alternatives shown in table 15. Based on this analysis, trade-offs between the two plans were performed. The resulting plan provided for disposing of the dredged material in Areas C, F, and G to provide an optimum level of contributions to the NED account and the EQ account. The plan also provides for timed construction to halt dredging during the migration period of the striped bass and shad. This also provides positive impacts on the EQ account.

[illegible]

The proposed widening project for Savannah Harbor was analyzed in light of the requirements set forth in Section 150 of the Water Resources Development Act of 1976 (Public Law 94-587) to determine the feasibility of establishing wetland areas by using disposal material. The establishment of wetlands as provided for in Section 150 was determined to be not feasible for the proposed widening project, based on the following considerations:

- The narrow and confined channels of the Savannah River, especially within the inner harbor, do not offer sufficient water area for the establishment of additional wetlands.

- The additional cost of hauling the material to a suitable site would substantially exceed the monetary restraints imposed by Section 150 due to the long haul distances involved.

- Due to the high velocities in the Savannah River and general harbor area, any wetland established in the area would probably be substantially altered or destroyed by the natural currents and tidal action.

- The coastal environment of Savannah provides abundant marshland for wildlife. The Savannah National Wildlife Refuge, which borders the upper part of the harbor, provides about 13,100 acres of protected and managed wetlands.

- Overboard dumping of material necessary to create wetlands in the Savannah area would be strongly opposed by the Environmental Protection Agency, the Georgia Department of Natural Resources, and the Fish and Wildlife Service due to the adverse effects on the migrating species of fish (striped bass and shad) inhabiting the Savannah River.

- There are sufficient upland areas near the proposed widening project to handle the disposal of the dredged material. Therefore, existing wetlands are not endangered or destroyed by this project.

It is concluded that the action as proposed in the recommendations section of this report has been analyzed and evaluated according to Principles and Standards and current policy; that wherever adverse effects are found to be involved, they cannot be avoided by following this reasonable alternative which would achieve the Congressionally specified purposes of the recommendation; that the recommended action is consonant with national policy statutes and administrative directives; that where the proposed action has an adverse effect, this effect is either ameliorated or substantially outweighed by other considerations of national policy; and that, on balance, the total public interest could best be served by its implementation.

RECOMMENDATIONS

It is recommended that the existing navigation project for Savannah Harbor, Georgia, authorized by the River and Harbor Act of 2 March 1907, House Document 181, 59th Congress, as amended by several Acts, be modified to provide for the construction of a Federal project for harbor improvement in accordance with the selected plan described in this report and shown on plate 1, with such modifications as in the discretion of the Chief of Engineers may be advisable at an added first cost to the United States presently estimated at $6,646,000;

That the work may be accomplished in separable units, phases, or features and that the written agreement with non-Federal interests required by Section 221 of the Flood Control Act of 1970, Public Law 91-611, may be obtained accordingly in compatible increments;

That cost sharing be based on updated preconstruction cost allocations using data and estimates current at that time;

That required cash contributions be paid in a lump sum prior to the start of construction, or, as may be permitted by the Chief of Engineers, in installments prior to the start of pertinent project units or sections and in accordance with his construction schedules;

Provided that, prior to the commencement of construction, non-Federal interests will enter into a written agreement satisfactory to the Secretary of the Army, that they will:

a. Convey without cost to the United States all lands, easements, and rights-of-way necessary for the construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of spoil and including necessary retaining dikes, wasteweirs, bulkheads, and embankments therefor, or the costs of such retaining works.

b. Accomplish without cost to the United States all alterations and relocations of buildings, transportation facilities (excluding railroad, combined highway and railroad, and publicly owned highway bridges and approaches thereto), storm drains, utilities and other structures and improvements made necessary by the construction.

c. Fulfill the requirements of non-Federal cooperation as specified in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) approved 2 January 1971.

d. Provide a cash contribution for the general navigation facilities equal to 50 percent of the final construction cost allocated to land enhancement resulting from landfill exclusive of lands, easements, rights-of-way, alterations, and relocations.

e. Hold and save the United States free from damages due to the construction works other than damages due to the fault or negligence of the United States or its contractors.

f. Provide and maintain without cost to the United States adequate public terminals and transfer facilities open to all on equal terms.

g. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the public terminals and transfer facilities commensurate with the depths provided in the related project areas.

h. Prohibit the erection of any structures within 125 feet of the bottom edge of the proposed channel widening.

It is further recommended that local interests be reimbursed or credited for work performed by them on the project subsequent to project authorization, and that the reimbursement or credit for the local expenditures be contingent upon approval by the Chief of Engineers, prior to commencement of work, of detailed plans and specifications and arrangements for prosecution of the work, and approval by the Chief of Engineers of the work as being in accordance with the authorized project. The amount of reimbusement or credit would be based on a determination of the reduction in cost of the Federal project resulting from local interests' work, such determination to be made at the time of Federal construction. Payment would be based on the lesser of either the Federal contract or actual cost.

Frank Walter

FRANK WALTER
Colonel, Corps of Engineers
District Engineer

REPORT OF THE DIVISION ENGINEER

SADPD-P(31 August 76) 1st Ind
SUBJECT: Savannah Harbor, Georgia, Feasibility Report for Harbor Widening

DA, South Atlantic Division, Corps of Engineers, 510 Title Building, 30 Pryor Street, S. W., Atlanta, Georgia 30303 22 October 1976

TO: Resident Member, Board of Engineers for Rivers and Harbors
Fort Belvoir, VA 22060

I concur in the recommendations of the District Engineer.

KENNETH E. McINTYRE
Brigadier General, USA
Division Engineer

SAVANNAH HARBOR
GEORGIA

FEASIBILITY REPORT

FOR
HARBOR WIDENING

Technical Report

APPENDIX 1

- *Section A - The Study and Report*
- *Section B - Resources and Economy of Study Area*
- *Section C - Problems and Needs*
- *Section D - Formulating a Plan*
- *Section E - The Selected Plan*
- *Section F- Economics of Selected Plan*
- *Section G- Division of Plan Responsibilities*

PREPARED BY THE
SAVANNAH DISTRICT, CORPS OF ENGINEERS
DEPARTMENT OF THE ARMY

SECTION A
The Study and Report

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The Study and Report

1. The detailed information presented in this technical appendix serves as a supplement to the findings presented in the main report.

PURPOSE AND AUTHORITY

2. The purpose of this study is to develop a plan of improvement for Savannah Harbor to satisfy the needs of local interests concerning the necessity for widening the harbor to accommodate the new generation of ships presently using and planning to use the Port of Savannah. The recommendations of this study are presented in the main report.

3. The study and report were made in compliance with the following resolution adopted 10 July 1968 by the Committee on Public Works of the House of Representatives, United States:

> Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Savannah Harbor, Georgia, printed in House Document Number 226, 89th Congress, 1st Session, and other pertinent reports with a view to determining whether any modification of the existing project is advisable at the present time, with particular reference to improvement of the channel between the present upstream limit of the 500-foot channel and the Seaboard Coastline Railroad Bridge.

After the Seaboard Coastline Railroad Bridge was demolished when struck by a ship and it became apparent that it would not be rebuilt, the Savannah Port Authority requested an increase in the scope of the study to include widening of the reach from the Railroad bridge upstream to Kings Island turning basin. This increase in the harbor study was approved by the Office of the Chief of Engineers (OCE) on 13 January 1972.

SCOPE OF THE STUDY

4. The study area was generally confined to the Savannah Harbor area. The remaining area influenced by the harbor was considered only as it related to activities in the harbor. The 15 state tributary area influenced by the harbor is shown on plate B-1. While economic impacts due to the harbor may extend over this entire area, the primary economic, environmental, regional, and social impacts occur within the general harbor area.

5. Based on the scope of the study authorization, an investigation was made of the immediate and future navigational needs relating to the extension of the present upstream limits of the existing 500-foot-wide navigation channel from the vicinity of Fig Island turning basin to the Kings Island turning basin.

6. Numerous meetings and workshops were held with local interests to formulate various elements of the plan of improvement to meet their navigational needs. The scope and detail of each element of the study were commensurate with the objective of selecting the most suitable plan of development and determining its feasibility, economic, environmental, and social aspects. Then the division of responsibilities between Federal and non-Federal interests was determined.

7. Engineering studies were based on the most recent annual survey, subsurface boring data available, information contained in report of findings of a model study made of the harbor, and on experience with the existing harbor project. Environmental studies were based on

visits to the disposal sites, elutriate tests performed on samples from the harbor, and upon information gathered from other similar activity. An analysis was made of the economic conditions of the area. Economic data was collected from various statistical sources published by Department of Commerce and Corps of Engineers. Harbor-use data was developed from Harbormaster records and inquiries made to the using industries.

STUDY PARTICIPANTS AND COORDINATION

8. The Savannah Harbor navigation studies were closely coordinated with both the Savannah Port Authority, whose main concern is port development and industrial development in the Savannah area, and with the Georgia Ports Authority whose primary interest in the Port of Savannah is the development and expansion of shipping and commerce.

9. In addition, the District Engineer coordinated the study with the following Federal, State, and local agencies: U.S. Coast Guard, Environmental Protection Agency, U.S. Fish and Wildlife Service, National Park Service, National Marine Fisheries Service, U.S. Department of Housing and Urban Development, Georgia Department of Natural Resources, Georgia Department of Community Development, Georgia Ports Authority, Savannah Port Authority, and Chatham County Commissioners. An initial public meeting was held on 25 June 1970. A formulation stage public meeting was held on 13 March 1974 to present the District Engineer's initial findings concerning the preliminary studies, including the advantages and disadvantages of the various alternatives, and to obtain the views and desires of local interests and individuals concerning these alternatives. These inputs were considered in formulating a sound detailed plan which meets local interests and needs within the scope of this study. A late stage public meeting was held on 27 May 1976 to present the plan to local interests and to obtain their comments.

THE REPORT

10. This report is organized into three parts--a main report and two appendices.

11. The main report is a nontechnical presentation dealing with the needs of local interests concerning the necessity for widening the inner harbor to remove the navigational restraint it imposes on the new generation of ships presently using and/or wanting to use the Port of Savannah.

12. The report presents a general picture of some of the navigational problems, needs, and remedial measures involved in formulating a plan for improving the harbor. Also included in the study is a comparison of the various alternatives; an evaluation of each alternative plan in terms of its beneficial and adverse impacts on the four Principles and Standards accounts (NED, EQ, RD, and SWB); a summary of each plan's economics indicating the benefits, costs, and justification; and, finally, division of project responsibility between Federal and non-Federal interests, coordination information, and recommendations for implementing the selected plan.

13. Appendix 1 is a technical report following the same general outline as the main report, but in greater detail for the technical reviewer. It treats the problems and solutions in a corresponding manner as the main report, but excludes subsequent plan implementation, coordination, and recommendation material.

14. Appendix 2 contains pertinent correspondence relating to coordination of the study with Federal, State, and local interests.

PRIOR STUDIES AND REPORTS

15. A number of Congressionally authorized reports have been prepared by the Chief of Engineers concerning the need for navigation improvements in the harbor of Savannah. A summary of the reports which have resulted in the present authorized harbor project is presented in Table A-1.

TABLE A-1
AUTHORIZING LEGISLATION OF PROJECTS IN SAVANNAH HARBOR, GEORGIA

Acts	Work authorized	Documents
R&H Act of Mar. 2, 1907	Tentative provisions for a 26-foot channel from the Quarantine Station to the Seaboard Coast Line Ry. Bridge.	H.D. 181, 59th Cong., 1st sess.
R&H Act of June 25, 1910	Definite provision for the 26-foot channel	
R&H Act of July 25, 1912	A 21-foot channel from the Seaboard Coast Line Ry. Bridge to the foot of Kings Island.	H.D. 563, 62d Cong., 2d sess.
R&H Act of Aug. 8, 1917	A 30-foot depth from the sea to the Quarantine Station.	H.D. 1471, 64th Cong., 2d sess.
R&H Act of Jan. 21, 1927	A 21-foot channel above Kings Island.	H.D. 261, 69th Cong., 1st sess.
R&H Act of Jan. 21, 1927	Channel 30 feet deep, with general width 500 feet, from the ocean to the Quarantine Station, thence 26 feet deep, general width 400 feet, to the Seaboard Coast Line Ry. Bridge, thence 21 feet deep and 300 feet wide to Kings Island. Widening at West Broad and Barnard Streets; anchorage basin; mooring dolphins; regulating dam across South Channel; relocation of the inland waterway; dredging Drakies Cut to 13 feet; widening to 525 ft. at Kings Island; extension of training walls, revetments, and jetties. Consolidation of projects relating to Savannah Harbor.	H.D. 262, 69th Cong., 1st sess.
R&H Act of July 3, 1930	Channel 26 feet deep and 300 feet wide from the Seaboard Coast Line Ry. Bridge to the foot of Kings Island.	S.D. 39, 71st Cong., 1st sess.

TABLE A-1 (Cont'd)

Acts	Work authorized	Documents
R&H Act of Aug. 30, 1935	Authorized the 30-foot project and eliminated from the project (a) the regulating dam across South Channel; (b) the relocation of the Inland Waterway; and (c) the further extension of training walls, revetments, and jetties.	H.D. 276, 7[illegible] Cong., [illegible] sess.
R&H Act of Mar. 2, 1945	Deepening the channel and turning basin above the Seaboard Coast Line Ry. Bridge from 26 to 30 feet and widening the channel opposite the Atlantic Coast Line Terminals to a maximum of 550 feet for a length of 5,000 feet.	H.D. 283, 76th Cong., 1st sess.[1]
R&H Act of Nov. 7, 1945	Deepening the channels to 36 feet deep and 500 feet wide across the ocean bar; 34 feet deep and generally 400 feet wide, increased to 550 feet opposite the Atlantic Coast Line Terminal, with a turning basin 34 feet deep at the Mexican Petroleum Corp. Refinery; and with such modifications thereof as the Secretary of War and the Chief of Engineers may consider desirable.	H.D. 227, 79th Cong., 1st sess.[1]
R&H Act of July 24, 1946	Extending channel 30 feet deep, 200 feet wide, upstream from Atlantic Creosoting Terminal to a point 1,500 feet below the Atlantic Coastal Highway Bridge, with turning basin 30 feet deep at upper end.	H.D. 678, 79th Cong., 2d sess.[1]
R&H Act of Sep. 3, 1954	Deepening the channel to 34 feet and widening to 400 feet, from the upper end of the presently authorized 34-foot channel in the vicinity of the American Oil Company Refinery wharf, to the Savannah Sugar Refining Corp. with a turning basin at the upper end of the proposed improvement, made by widening the channel to 600 feet for a length of 700 feet and providing approaches.	H.D. 110, 83d Cong., 1st sess.[1]

TABLE A-1 (Cont'd)

Acts	Work authorized	Documents
R&H Act of Oct. 23, 1962	Enlargement of turning basin near Kings Island to a width of 900 feet and a length of 1,000 feet, with suitable approaches, at a depth of 34 feet.	S.D. 115, 87th Cong., 2d sess.
R&H Act of Oct. 27, 1965	Deepening the bar channel from 36 feet to 40 feet, the channel between the bar channel and Garden City Terminal from 34 feet to 38 feet, and the channel from the Gar-Garden City Terminal to the vicinity of the Savannah Sugar Refining Corp., from 30 feet to 36 feet; widening the bar channel from 500 feet to 600 feet, the channel between Fort Pulaski and Atlantic Coast Line Terminal from 400 feet to 500 feet, and the channel between Garden City Terminal and the Savannah Sugar Refining Corp. from 200 feet to 400 feet; providing necessary wideners of the bends; constructing a new turning basin 900 feet wide by 1,000 feet long by 34 feet deep opposite the Atlantic Coast Line Terminal; and enlargement of existing turning basin at the American Oil Company Terminal from 600 feet wide by 600 feet long to 900 feet wide by 1,000 feet long.	H.D. 226, 89th Cong., 1st sess.
R&H Act of Oct. 27, 1965	Providing sediment control works consisting of tide gate structure across Back River; sediment basin 40 feet deep, 600 feet wide, about 2 miles long, with entrance channel 38 to 40 feet deep and 300 feet wide; drainage canal across Argyle Island 15 feet deep and 300 feet wide; control works and canals for supplying fresh water to Savannah National Wildlife	H.D. 263, 89th Cong., 1st sess.

TABLE A-1 (Cont'd)

Acts	Work authorized	Documents
	(Continuation) Refuge and facilities to mitigate damages to presently improved areas other than refuge lands.	
Adopted under Section 201 Authority by Public Works Committee	Provides for the enlargement of Kings Island turning basin from 980 feet wide by 1,000 feet long by 34 feet deep to 1,500 feet wide by 1,600 feet long by 38 feet deep. Also provides for the incorporation of the LASH turning basin as an element of the existing Federal project.	H.D, 94-520 9 June 1976

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[1] Contains latest published maps.

SECTION B

Resources and Economy of Study Area

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Resources and Economy of Study Area

1. The general economy of the Savannah area has been closely associated throughout its history with the shipping activities of the Savannah port. A general understanding of the resources, development, and economy of the Savannah area is essential in identifying problems and needs associated with Savannah Harbor and in evaluating appropriate alternative solutions.

ENVIRONMENTAL SETTING AND NATURAL RESOURCES

2. Savannah is one of the oldest Atlantic seaports. The port is open to year-round navigation because of a mild climate. Delays to shipping because of fog or other inclement weather are relatively infrequent. Savannah is appreciably nearer Far Eastern and South American ports than all North Atlantic ports and is closer to the eastern ports of South America than are Gulf of Mexico ports.

3. The City of Savannah is located on the Savannah River, the dividing line between Georgia and South Carolina, in the eastern section of the State, 18 miles from the Atlantic Ocean. It is approximately 83 miles southwest of Charleston, South Carolina, and 123 miles north of Jacksonville, Florida. The area within the Savannah city limits consists of 21 square miles. Chatham County, of which Savannah is the county seat, consists of 441 square miles. The total land area of Georgia,the largest state east of the Mississippi River, is 58,518 square miles.

TERRAIN

4. The mainland of Chatham County, including Savannah, is separated from the Atlantic Ocean by several barrier islands and intervening salt marsh and tidal rivers. The barrier islands within Chatham County include Tybee Island and Wassaw Island. North of these, in South Carolina, lie Daufuskie Island and Hilton Head Island. Popular ocean beaches are located on both Tybee Island and Hilton Head Island. Between these outer islands and the mainland, there are several other islands formed by the tidal creeks. These are generally surrounded by marsh, although the islands themselves exhibit the same upland type vegetation that is common to the general area.

5. The entrance to the Savannah River and the harbor is located just north of Tybee Island approximately 75 statute miles south of Charleston Harbor, South Carolina, and 70 statute miles north of Brunswick Harbor, Georgia. The harbor comprises the lower 21.31 miles of the Savannah River, which with certain of its tributaries constitutes the boundary between South Carolina and Georgia. A channel 10.8 miles in length is maintained from the mouth of the harbor across the bar to the Atlantic Ocean.

6. The City of Savannah is located on a bluff overlooking the Savannah River. The main business district has an average elevation of about 40 feet above mean sea level (msl). The industrial areas to the west, north, and east of the city are considerably lower with an average elevation of about 10 to 15 feet msl. Although these lower areas are susceptible to tidal surge, the surrounding salt marshes and barrier islands located to the east of the city lessen the effects of storm surge. The Clark Hill Dam at Augusta, Georgia, controls flow of the Savannah River, lessening still further the chance of injurious floodwaters. Chatham County lies entirely within the coastal plain province and the topography is level to slightly rolling, with numerous marshlands and wooded areas lying between the ocean coastline and the mainland. The principal industrial areas are natural

ground rather than headland. Most area soils consist of sandy loam underlaid by 3 feet to 4 feet of sand on a subsoil of clay. Piling and other expensive foundations are therefore not essential except for exceptionally heavy concentrated loads.

LAND USE

7. Much of the mainland south of the Savannah River is devoted to the urban development associated with Savannah. East of Savannah lie the natural marshlands and the islands. The islands are undergoing development into mainly residential areas as Savannah grows. Urban and industrial development extends westward of Savannah, gradually giving way to the natural woodlands in the western part of the county. North of Savannah, in South Carolina, lies the Savannah National Wildlife Refuge. Land in this area is maintained in a nearly natural state.

8. The Savannah waterfront is improved at intervals from a point east of the city to the vicinity of Continental Can Company, a distance of 10 miles and across the river for a distance of [illegible] mile on Hutchinson Island. Principal general cargo terminals are about 18 miles from the mouth of the harbor. Facilities include piers and shipside warehouses for general cargoes and specialized storage for oil, fertilizer materials, gypsum, sugar, and other bulk commodities.

CLIMATE

9. The area has a temperate climate, with a seasonal mean temperature of 51° F. in winter, 64° F. in spring, 80° F. in summer, and 66° F. in autumn. The growing season averages 273 days from an average date of last freeze on 26 February to a first freeze in autumn on 26 November. Killing frost has occurred as late as 16 April and as early in

autumn as 25 October. The lowest recorded temperature for the area is 8° F. and the highest is 105° F. Summer temperatures are moderated frequently by afternoon thunderstorm activity.

10. Of the normal 48.91 inches of rain, about half falls in the thunderstorm season of 15 June through 15 September. The remainder, produced principally by squall-line and frontal showers, is spread over the other 9 months with a minor peak in March. Considerable periods of fair, mild weather are experienced in October, November, April, and to a lesser extent in May. Snow is a rarity and does not occur even on an average of once a year. Severe tropical storms affect this area about once in 10 years. Rainfalls from these storms constitute heavy sustained precipitation. Instances of this are 22.79 inches in August 1958 and 22.88 inches in September 1924.

ADJOINING WATER COURSES

11. In addition to the Atlantic Ocean, the study area adjoins the Intracoastal Waterway (traversing the eastern portion of Chatham County with a project depth of 12 feet and width of 90 feet in land cuts and 150 feet in open water) and the Savannah River Below Augusta, Georgia, authorized navigation project (consisting of a navigation channel 9 feet deep and 90 feet wide from river mile approximately 202.6 in the vicinity of Augusta, Ga., to the upper end of Savannah Harbor at river mile 21.31).

ARCHAEOLOGICAL AND HISTORICAL CONSIDERATIONS

12. Within the City of Savannah an area bordered by East Broad Street, Gwinnett Street, West Broad Street, and the Savannah River has been designated as the Savannah Historic District in the "National Register of Historic Places." The historic district includes much of City

Founder James Oglethorpe's original plan, a plan which is highly regarded because of its important innovations in urban design. Many of the buildings in the district have architectural merit and exhibit unique examples of English Regency, Georgia townhouse, and Gothic Revival architecture. The district also contains many beautiful churches, old public buildings, and lovely parks.

13. Located approximately 3 miles east of Savannah on the south bank of the Savannah River is Fort Jackson, an important historical monument. The site of Fort Jackson has been an important location for fortifications protecting the City of Savannah since colonial times. In 1965, Fort Jackson was presented to the Georgia Historical Commission, which restored the fort for use as a museum of the maritime history of Georgia. The fort is presently being run by the Coastal Heritage Society.

14. Fort Pulaski, an important Civil War monument, is located 17 miles east of Savannah on Cockspur Island. Constructed in the early 19th century (1829-1847), this facility served as a major Civil War fortification along the Georgia coast until its capture in 1862 by Federal troops. A Civil War relic, the sunken C.S.S. GEORGIA, a Confederate ram, is located at river mile 11 where the river divides into Front and Back Rivers. Efforts are being made to find an adequate source of funds for salvage.

15. Located on lands adjacent to the harbor are the remains of several Indian campsites and burial grounds. These sites have been studied by the Institute of Archeology and Anthropology, University of South Carolina, but were not selected for further investigations.

NATURAL RESOURCES

16. The Savannah area is rich in natural resources associated with a coastal environment. The Savannah River and harbor area may well be considered one of the most significant natural resources of Georgia. The adjacent marshlands support an abundance of marine life while the barrier islands support numerous species of animals and birds.

17. Each spring and fall the main Savannah River, Back River, Middle River, and the numerous interconnecting tidal streams are hosts to two anadromous species of commercial and sport fishes; namely, shad and striped bass. Striped bass move up the Savannah River during the spawning season, beginning in March and continuing through May. The fish remain upstream until late July, then descend the river. Striped bass again appear in the estuary in late fall and remain until the following spring.

18. In 1931, the U.S. Fish and Wildlife Service established the Savannah National Wildlife Refuge, encompassing 13,000 acres of once-cultivated lowlands and marshes along the northern bank of the lower Savannah River. The refuge is located within the Atlantic flyway and is an important nesting area for the wood duck. Since its establishment, approximately 3,000 acres of old ricefields and several impoundments have been developed to provide suitable resting and feeding areas for the thousands of waterfowl that winter in the south each year. The refuge also provides excellent habitat for many species of reptiles, amphibians, and mammals.

19. Other notable resources in the area include the forests to the north and west and the freshwater supply available through both the Savannah River and an excellent underground aquifer. Resources that enhance recreational opportunities in the area center mainly on the ocean beaches of the barrier islands.

HUMAN RESOURCES

GENERAL

20. The Port of Savannah serves a 15-state area extending from southeast Georgia in a northwesterly direction to the Canadian border. The 15 states are North Dakota, South Dakota, Nebraska, Minnesota, Ohio, Iowa, Wisconsin, Virginia, Illinois, Indiana, Kentucky, Tennessee, North Carolina, South Carolina, and Georgia. Freight rates from any point within the dark area of figure B-1 to Savannah are often equal to or less than rates to other Atlantic and Gulf ports.

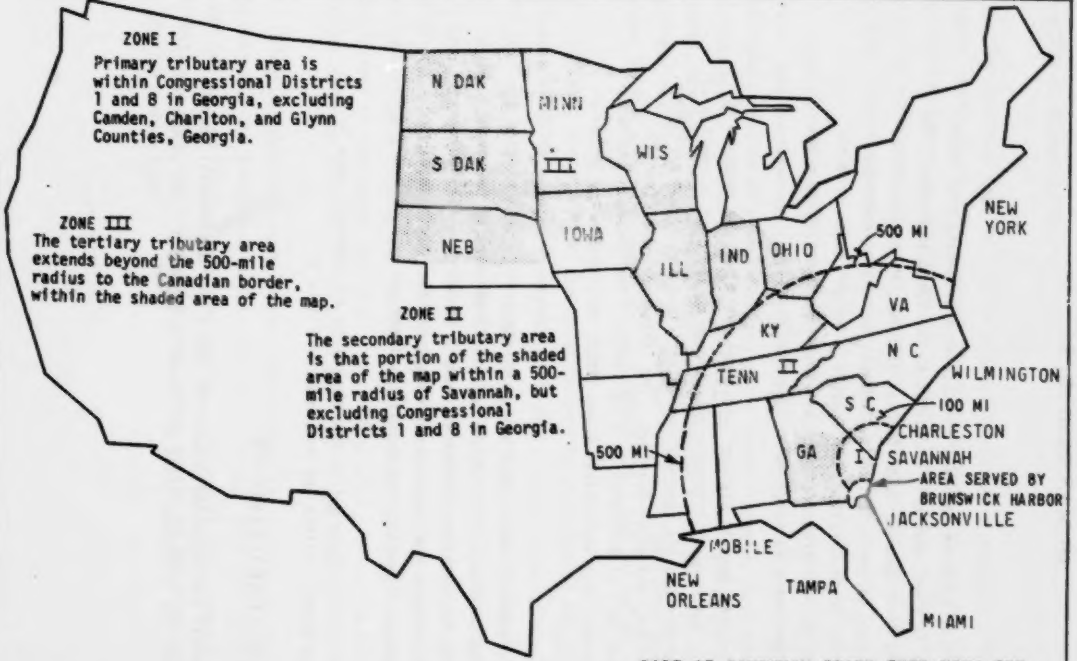
21. This 15-state area is divided into three parts for the purposes of this report. The Primary Tributary Area served by the port is considered to be that within Georgia Congressional Districts 1 and 8, but excluding Camden, Charlton, and Glynn Counties. The latter are more directly served by the Port of Brunswick in Glynn County. The Savannah and Macon Standard Metropolitan Statistical Areas (SMSA) fall within the Primary Tributary Area.

22. The Secondary Tributary Area served by the port is that portion of the dark area of figure B-1 within a radius of 500 miles of Savannah, but excluding Congressional Districts 1 and 8 in Georgia. It includes the SMSAs of Atlanta and Augusta, Georgia; Asheville, North Carolina; and Chattanooga, Knoxville, and Nashville, Tennessee.

23. The Tertiary Tributary Area extends beyond the 500-mile zone to the Canadian border, within the dark area of figure B-1.

POPULATION CHARACTERISTICS

24. Historical and projected population levels for the Primary, Secondary, and Tertiary Tributary Areas are given in table B-1. The population



ZONE I
Primary tributary area is within Congressional Districts 1 and 8 in Georgia, excluding Camden, Charlton, and Glynn Counties, Georgia.

ZONE III
The tertiary tributary area extends beyond the 500-mile radius to the Canadian border, within the shaded area of the map.

ZONE II
The secondary tributary area is that portion of the shaded area of the map within a 500-mile radius of Savannah, but excluding Congressional Districts 1 and 8 in Georgia.

PORT OF SAVANNAH TRADE TERRITORY FOR EXPORT AND IMPORT TRAFFIC

SOURCE: GEORGIA PORTS AUTHORITY

FIGURE B-1

TABLE B-1
POPULATION, 1950-2030
PRIMARY, SECONDARY AND TERTIARY TRIBUTARY AREAS

AREA	1950	1960	1970	1980	1990	2000	2010	2020	2030
Primary Tributary									
Cong. Dist. 1	346711	376765	389029	389500	409400	408600	420200	426600	435100
Cong. Dist. 8 1/	456966	495232	521034	555000	614500	651600	685500	728900	772600
Subtotal 2/	803677	871997	910063	944500	1023900	1060200	1105700	1155500	1207700
Secondary Tributary									
SMSAs									
Atlanta (15 counties)	864462		1597836	1960000	2438500	2830600		3546900	
Augusta, Ga.	162336		254093	248700	265900	277400		303000	
Asheville, N.C.	124589		145311	170000	192000	207900		235100	
Chattanooga, Tenn.	248074		305572	375700	439700	484200		561800	
Knoxville, Tenn.	339488		401136	451400	500100	527000		565100	
Nashville, Tenn.	384307		542063	638900	769100	872200		1500000	
Non-SMSA Area	7863600		9156400	10212430	11338600	12177600		13383600	
	9986856		12402411	14057130	15943900	17376900	18420000	19645500	20824200
Tertiary Tributary	22707400	25874300	28277700	30451400	32729560	34586630	37699400	41076640	44362800
Total Area Served By Port of Savannah	33497933		40680111	44508530	49697360	53023730	57225100	61877640	66394700
Georgia	3444578	3943116	4589575	5147300	5907400	6458100	6995100	7491100	8022200
U.S.	150697361	179323175	203235298	223532000	246039000	263830000	279660000	297146000	315000000

1/ Includes Houston Co. portion of Macon SMSA.
2/ Includes Savannah and Macon SMSA.
Source: OBERS (Series E) 1972 and 1975 where available.

of the Primary Tributary Area is expected to increase from 910,063 in 1970 to 1,207,700 in 2030. The Savannah SMSA, which was enlarged in 1973 to include Chatham, Bryan, and Effingham Counties, will increase from 207,987 in 1970 to 235,000 in 2030. The Macon SMSA consists of four counties and is considered to be within the Primary Tributary Area even though Houston County falls just outside of Congressional District 8. The Macon SMSA is expected to grow from 226,782 in 1970 to 418,600 in 2030. Population density in 1970 in this area ranged from 4.5 per square mile in Echols County to 564.6 per square mile in Bibb County, as compared with 79 for the State of Georgia.

25. Many of the commodities moving through Savannah Harbor either come from or go to SMSAs in the Secondary Tributary Area. In fact, the Savannah Metropolitan Planning Commission, in April of 1970, estimated that the Atlanta Standard Metropolitan Statistical Area (SMSA) produced two-fifths of the manufactured exports moving through the port. The Atlanta SMSA in 1970 consisted of five counties with a total population of 1,393,929. It was enlarged in 1973 from five counties to 15. Historic and projected population levels for the revised 15-county SMSA follow:

1940..........	692,723	1990..........	2,438,500
1950..........	864,462	2000..........	2,830,600
1960..........	1,169,047	2010..........	3,211,400
1970..........	1,597,816	2020..........	3,546,900
1980..........	1,960,000	2030..........	3,901,600

MAJOR SKILLS AND OCCUPATIONS

26. The Civilian Work Force in September 1973 in Chatham County was 81,500. It was 97,100 for the same period in the Macon SMSA. The former five-county Atlanta SMSA had a Civilian Work Force of 767,800 in September 1973. The Augusta SMSA had a Civilian Work Force of 111,400 in the same month. The Civilian Work Force in Georgia in September 1973 was 2,127,800.

27. There are eight Economic Development Administration (EDA)-designated counties within a reasonable commuting distance of the project: Bryan, Effingham, Evans, Long, McIntosh, and Screven Counties, Georgia, and Hampton and Jasper Counties in South Carolina. In addition, Savannah, Ga., was designated an Economic Development Center as of 27 June 1973. In the State of Georgia there are 92 EDA-designated counties out of the State total of 159.

EMPLOYMENT

28. Employment by industry in the Primary Tributary Area, both historic and projected, is given in table B-2. The estimated 1973 manufacturing employment in the Primary Tributary Area, by type of product, is given in table B-3.

PERSONAL INCOME

29. Table B-4 shows that in 1970 the per capita income for Congressional District 1 was $2,248 and for Congressional District 8 it was $2,173. For the State of Georgia the figure was $2,630. The 1970 U. S. per capita income was $3,466. The percentages of families in each income group in Districts 1 and 8 and in Georgia are also given in table B-4.

TABLE B-2
EMPLOYMENT BY INDUSTRY IN PRIMARY TRIBUTARY AREA, 1970-2030

District 1 2/	1970	1980	1990	2000	2010	2020	2030
Ag. Forest, Fisheries	9383	7910	6708	5298	5505	5430	3620
Mining	154	(S)1/	(S)	(S)	(S)	(S)	
Construction	10151	12656	13416	14128	14680	14480	14480
Manufacturing	31440	36386	40248	42384	44040	43440	43440
Trans. Comm., Pub. Util.	9903	11074	11739	12362	12845	12670	12670
Wholesale, Retail Trade	26289	32431	33540	36380	36700	36200	36200
Finance, Ins., Real Estate	4878	6328	6708	7064	8258	7240	9050
Service	33494	42714	45279	49448	51380	52490	52490
Public Admin.	7331	8701	10062	9536	10092	9050	9050
SUB TOTAL	133023	158200	167900	176600	183500	181000	181000
District 8 2/							
Ag., Forest, Fisheries	12966	11465	10256	8445	9108	6312	6312
Mining	2208	2293	5128	5630	3036	3156	3156
Construction	10909	16051	17948	22520	21252	22092	25248
Manufacturing	40995	52739	56408	59115	60720	59964	56808
Trans., Comm., Pub. Util.	10541	13758	15384	16890	21252	22092	22092
Wholesale, Retail Trade	29183	41274	48716	53485	60720	63120	63120
Finance, Ins., Real Estate	5567	9172	10256	11260	12144	15780	15780
Service	43321	64204	71792	81635	91080	97836	97836
Public Admin.	12730	18344	20512	22520	24288	25248	25248
SUB TOTAL	168420	229300	256400	281500	303600	315600	315600
TOTAL - Primary Tributary Area	301443	387500	424100	458100	487100	496600	496600

1/ Too small to project.

2/ Employment by industry projected at same rate of growth as in Savannah BEA Economic Area for District 1 and Macon BEA Economic Area for District 8 using Series C - these distributions then applied to Series E updates.

Source: OBERS Series E. See also footnote 2/.

TABLE B-3
MANUFACTURING EMPLOYMENT BY TYPE OF PRODUCT IN PRIMARY TRIBUTARY AREA, 1970 AND 1973

	District 1		District 8		Primary Tributary Area	
	1970 1/	1973 2/	1970 1/	1973 2/	1970 1/	1973 2/
Total Mfg. Employment	31440	32459	40995	41937	72435	74396
Food and Kindred Pro.	4638	4690	4632	4635	9270	9325
Textile Mill Products	682	720	8765	8897	9447	9617
Apparel, other Fabric Pro.	4848	5013	9392	9571	14240	14584
Printing	874	895	910	971	1784	1866
Chemicals, Allied Pro.	2037	2169	914	975	2951	3144
Lumber Products, Furniture	5895	5807	7400	7323	13295	13130
Machinery, All	588	625	1500	1626	2088	2251
Machinery, Excl. Electrical	381	402	1418	1525	1799	1927
Elec. Mach., Supplies	207	223	82	85	289	308
Transportation Equip.	2408	2699	1566	1681	3974	4380
Motor Vehicles, Equip.	459	502	734	780	1193	1282
Trans. Equip., excl. Motor Veh.	1949	2197	832	905	2781	3102
Other Manufacturing	9470	9841	5916	6258	15386	16099
Paper Allied Products	6425	6651	1935	2055	8360	8706
Petroleum Refining	558	547	37	44	595	591
Primary Metals	98	102	66	79	164	181
Fabricated Metals, Ordnance	740	790	1044	1096	1744	1886
Miscellaneous Mfg.	1649	1751	2874	2984	4523	4735

1/ Georgia Statistical Abstract 1972.

2/ Based on same rate of growth as that from 1966-80 in Savannah BEA Economic Area for District 1 and Macon BEA Economic Area for District 8.

TABLE B-4
FAMILY INCOME AND OCCUPATION OF WORKERS IN PRIMARY TRIBUTARY AREA AND GEORGIA

Families with Income	District 1 1/		District 8		Georgia	
	Number	Percent*	Number	Percent*	Number	Percent*
Less than $3000	18904	19.9	22400	19.9	168366	14.6
3000-4,999	14457	15.2	17785	15.8	145457	12.7
5000-6,999	14375	15.2	17496	15.5	164650	14.3
7000-9,999	19083	20.1	21864	19.4	235687	20.5
10,000-14,999	17769	18.7	20931	18.6	261597	22.8
15,000-24,999	8157	8.6	9541	8.5	136763	11.9
25,000-or more	2069	2.2	2616	2.3	37251	3.2
15,000 or more	10226	10.8	12157	10.8	174014	
Median Family Income	$7102		$6836		$8165	
Per Capita Income	$2248		$2173		$2630	
Total Number of Families	94814		112636		1149771	
Occupation of Workers:	Male	Female	Male	Female	Male	Female
White Collar	26170	25939	31134	31317	391617	371685
Professional/technical	7019	7333	8330	9103	113368	95674
Managers/admin.	9025	2064	10544	2372	123138	24187
Salesworkers	5209	3331	6269	3920	77667	43456
Clerical	4917	13211	5991	15922	77444	208368
Blue Collar	41922	11162	53150	16730	533220	165621
Craftsmen/foremen 2/	17594	-	23180	-	228945	-
Operatives	16332	9630	20576	14407	221893	143437
Nonfarm laborers 2/	7996	-	9394	-	82382	-
Service Workers	5791	14109	6955	18280	70753	152347
Private Household 3/	-	5707	-	6966	-	55237
Farm Workers	7269	609	9403	1477	53377	8149

1/ Excluding Camden, Charlton and Glynn
2/ This category not given for women.
3/ This category not given for men.
* Totals do not add to 100% due to the two categories "15,000 or more" and "25,000 or more."

Source: Congressional District Data Book, 93rd Congress, Oct. 72.

DEVELOPMENT AND ECONOMY

TRANSPORTATION FACILITIES

30. Access to the Port of Savannah is provided by all modes of transportation. Federal Highways 17 and 80 and State Highways 21, 25, 26, 30, 204, and 404 serve the port. Interstate Highways I-16 and I-95 come into Savannah but there are some stretches leading to other parts of the state that remain unfinished. Access by truck will be greatly improved when these gaps are completed. One intrastate and 25 interstate motor freight carriers provide service to the port area. There are four railroads presently serving Savannah: Central of Georgia, Seaboard Coast Line, Southern, and Savannah and Atlanta. Bus service to other cities is also available. Delta and National Airlines come into the local Savannah airport. The Savannah River is navigable between Savannah and Augusta.1/

PORT FACILITIES

31. In addition to the three major terminals, the Garden City and Ocean Terminals of the Georgia Ports Authority, and the East Coast Terminal, many of Savannah's industries maintain their own private docks. A partial listing of firms maintaining private docks would include many of the major oil companies for various petroleum products, Flintkote and National Gypsum Company for importation of gypsum rock, and other companies such as Georgia-Pacific, Union Camp Corporation, Continental Can Company, Atlantic Cement Company, Atlantic Creosoting Company, Savannah Electric and Power Company, Georgia Kaolin International, and Diamond Manufacturing Company.

32. Georgia Ports Authority (GPA) has expended large sums of money to develop facilities which expedite the handling and storage of cargo. The relatively new dry bulk terminal facility employs advanced concepts of

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1/ Economic Development Profile on Savannah, Georgia, Georgia Department of Community Development.

engineering to provide flexible and efficient dry bulk transfer. The two berths at the dry bulk terminal have only a minimum platform area since the dry bulk cargo is loaded or unloaded using a conveyor system. The bulk material can be automatically stored in or reclaimed from one of the 14 compartments in the huge 170-foot-wide by 1,368-foot-long storage building, or moved directly back and forth between the ship and railroad boxcars or trucks.

33. Containerized shipment of general cargo has somewhat revolutionized modern port design: GPA's container facility has two container berths totaling 1,800 feet and two container cranes, each with a lifting capacity of 45 tons and a loading/unloading cycle of 90 seconds. A third container berth with crane is scheduled to be in operation late in 1976. A fourth berth with crane is planned for completion in early 1977.

34. In 1972, GPA began operation of the LASH (Lighter Aboard Ship) Terminal located near the mouth of the Savannah River. This facility is one of the simplest transfer facilities in the port since the ship uses its own track-mounted bridge crane for rapid loading and unloading of the barges. The barges are then moved by towboat to the point of destination.

35. Several transit storage sheds and associated wharf areas are operated by GPA to serve many different users and GPA has well over $120 million invested in their total harbor facilities. Wharves and other facilities owned and operated by individual companies line the harbor.

36. The Port of Savannah has been successful in attracting new industry in the past and several new developments have been announced for the near future. Southern Energy's Liquefied Natural Gas (LNG) regasification facility will receive liquefied natural gas via cryogenic tankers from Algeria, regasify it, and distribute the gas throughout a six-state area. When the facility is in full operation, it will handle about 3 million short tons of LNG per year.

37. The Port of Savannah offers several locations for oil refinery development. As the exploration for oil along the southeast coastline progresses, the need for and the possibilities of a refinery will become more definitive. One oil company has already announced its intention to develop a facility on the South Carolina side of the harbor.

38. Georgia Ports Authority has set aside an area for future container facilities and a shipbuilding company has announced its intention to locate in the port area.

WATERWAY COMMERCE

39. Historical tonnages used to project future commerce in Savannah Harbor were obtained from Waterborne Commerce Statistics, published annually by the Corps of Engineers as the official source of data on commodity movements. Annual tonnages handled by the port are shown in table B-5 for 1962-1975. This table shows a general increase in total tonnage handled by the port facilities. It also shows the significance of foreign trade on the port's activities.

TABLE B-5
SAVANNAH HARBOR
TOTAL TONNAGES, 1962-1975

Year	Import	Export	Domestic tonnage	Total tonnage
1962	1,996,517	587,832	1,974,062	4,458,411
1963	1,917,640	611,614	1,581,532	4,110,786
1964	1,939,319	771,954	1,446,264	4,157,537
1965	2,078,037	688,229	1,686,016	4,452,282
1966	2,088,654	799,734	1,868,275	4,756,663
1967	1,863,630	884,303	2,032,709	4,780,642
1968	2,316,927	1,147,308	2,561,222	6,025,457
1969	2,229,164	1,036,896	2,534,467	5,800,527
1970	2,736,471	1,398,183	2,676,116	6,810,770
1971	3,157,786	1,301,613	2,772,545	7,231,944
1972	3,650,220	1,376,680	3,010,271	8,037,171
1973	4,052,364	1,766,444	3,161,393	8,980,201
1974	4,251,970	1,981,240	3,465,469	9,698,679
1975	3,120,987	1,781,919	2,690,391	7,593,297

Source: Waterborne Commerce Statistics, 1965-1975.

40. Table B-6 shows 1975 commerce movements through Savannah Harbor, broken down by foreign and domestic commerce movements. As may be derived from the table, major commodity groups which move on general cargo, container, and LASH vessels include pulp and paperboard; iron and steel shapes; basic textiles; and fabricated metal products. Major liquid bulk commodities which move in tankers or ocean-going barges include distillate and residual fuels and naptha; sodium hydroxide, gasoline, liquid sulfur; crude petroleum; and asphalt, tar, and pitches. Major dry bulk commodity movements in the harbor include kaolin; gypsum; coke, petroleum asphalts and solvents; and building cement. Total Savannah Harbor tonnages approached 10 million in 1974 with 8.6 million foreign and coastwise tons. These 14 major commodity groups accounted for 84 percent of total foreign and coastwise harbor tonnages in that year. In 1975, total harbor tonnages dropped to 7.6 million, with foreign and coastwise tonnages totalling 5.7 million. These 14 commodity groups represented 81 percent of harbor foreign and coastwise tons in 1975.

41. Commodity analysis and projection. After identification and grouping of major commodity movements through Savannah Harbor, each major group was separately investigated. For export groups, major sources were determined. For import groups, major users were determined where possible. The respective sources and users were identified by industrial group and general location. Attempts were then made to correlate historical port tonnage movements with historical earnings in appropriate earnings categories and geographical areas.

42. No attempt was made in this analysis to correlate with historical years further back than 1962. This decision was made after investigations of the nature of historical earnings and other economic indicator

TABLE B-6
FOREIGN AND DOMESTIC FREIGHT TRAFFIC
SAVANNAH HARBOR, GEORGIA
1975

FREIGHT TRAFFIC, 1975

(SHORT TONS)

COMMODITY	TOTAL	FOREIGN IMPORTS	FOREIGN EXPORTS	DOMESTIC COASTWISE RECEIPTS	DOMESTIC COASTWISE SHIPMENTS	DOMESTIC INTERNAL RECEIPTS	DOMESTIC INTERNAL SHIPMENTS	LOCAL
TOTAL	7,993,207	3,130,967	1,781,919	1,700,276	319,909	139,145	213,098	740,089
0101 COTTON, RAW	107	-	64	-	-	43	-	-
0103 CORN	22	-	22	-	-	-	-	-
0111 SOYBEANS	17	-	17	-	-	-	-	-
0119 OILSEEDS, NEC	91,923	-	89,282	-	-	2,272	-	369
0121 TOBACCO, LEAF	1,132	574	558	-	-	-	-	-
0129 FIELD CROPS, NEC	33	-	33	-	-	-	-	-
0131 FRESH FRUITS AND TREE NUTS	6,704	-	6,704	-	-	-	-	-
0133 COFFEE	34	34	-	-	-	-	-	-
0141 FRESH AND FROZEN VEGETABLES	844	70	774	-	-	-	-	-
0151 LIVE ANIMALS	72	-	72	-	-	-	-	-
0161 ANIMALS AND PRODUCTS, NEC	1,199	434	720	-	36	9	-	-
0191 MISCELLANEOUS FARM PRODUCTS	303	5	298	-	-	-	-	-
0841 CRUDE RUBBER AND ALLIED GUMS	41,690	41,690	-	-	-	-	-	-
0861 FOREST PRODUCTS, NEC	2,017	1,985	25	-	-	-	7	-
0911 FRESH FISH, EXCEPT SHELLFISH	1,513	1,367	146	-	-	-	-	-
1051 ALUMINUM ORES, CONCENTRATES	25,263	24,140	-	-	-	1,123	-	-
1061 MANGANESE ORES, CONCENTRATES	1,900	-	1,900	-	-	-	-	-
1091 NONFERROUS ORES, CONCENT, NEC	54,412	43,220	10,466	-	-	726	-	-
1311 CRUDE PETROLEUM	673,140	673,140	-	-	-	-	-	-
1411 LIMESTONE	569,221	569,040	181	-	-	-	-	-
1412 BUILDING STONE, UNWORKED	9,050	7,402	1,648	-	-	-	-	-
1442 SAND, GRAVEL, CRUSHED ROCK	7,818	-	809	-	-	7,009	-	-
1451 CLAY	930,900	30	910,429	-	-	17,000	-	1,293
1471 PHOSPHATE ROCK	16,426	13,714	-	2,712	-	-	-	-
1479 NATURAL FERTILIZER MATS, NEC	251	251	-	-	-	-	-	-
1493 SULPHUR, LIQUID	114,992	-	-	114,992	-	-	-	-
1499 NONMETALLIC MINERALS, NEC	20,776	17,509	3,267	-	-	-	-	-
1911 ORDNANCE AND ACCESSORIES	9	9	-	-	-	-	-	-
2011 MEAT, FRESH, CHILLED, FROZEN	9,200	49	9,048	-	103	-	-	-
2012 MEAT AND PRODUCTS, NEC	505	317	148	-	-	-	40	-
2014 TALLOW, ANIMAL FATS AND OILS	4,007	-	4,007	-	-	-	-	-
2019 ANIMAL BY-PRODUCTS, NEC	789	-	519	-	-	270	-	-
2021 DAIRY PRODUCTS, NEC	177	21	-	-	39	-	117	-
2031 FISH AND SHELLFISH, PREPARED	2,020	1,980	40	-	-	-	-	-
2034 VEGETABLES AND PREP, NEC	6,039	5,117	902	20	-	-	-	-
2039 PREP FRUIT AND VEG JUICES, NEC	21,997	16,037	5,837	-	-	123	-	-
2041 WHEAT FLOUR AND SEMOLINA	4,050	-	2,760	-	-	-	1,290	-
2042 PREPARED ANIMAL FEEDS	2,016	-	2,016	-	-	-	-	-
2049 GRAIN MILL PRODUCTS, NEC	89,948	419	87,147	-	-	530	57	1,795
2061 SUGAR	93,449	93,449	-	-	-	-	-	-
2081 ALCOHOLIC BEVERAGES	8,835	7,976	63	42	6	17	731	-
2091 VEGETABLE OILS, MARG, SHORT	24,793	6	24,787	-	-	-	-	-
2092 ANIMAL OILS AND FATS, NEC	101	99	2	-	-	-	-	-
2099 MISCELLANEOUS FOOD PRODUCTS	55,173	5,036	30,670	20	383	69	18,906	-
2111 TOBACCO MANUFACTURES	142	64	68	-	10	-	-	-
2211 BASIC TEXTILE PRODUCTS	140,030	118,909	13,781	-	602	7,491	1,315	-
2212 TEXTILE FIBERS, NEC	1,469	1,432	37	-	-	-	-	-
2311 APPAREL	6,932	6,830	102	-	-	-	-	-
2411 LOGS	3,103	1,102	1,894	-	-	107	-	-
2413 FUEL WOOD, CHARCOAL, WASTES	1,212	1,212	-	-	-	-	-	-
2414 TIMBER, POSTS, POLES, PILING	6,491	-	6,201	-	-	-	160	130
2416 WOOD CHIPS, STAVES, MOLDINGS	25	25	-	-	-	-	-	-
2421 LUMBER	17,912	4,333	12,372	-	60	217	940	-
2431 VENEER, PLYWOOD, WORKED WOOD	56,391	53,302	2,109	-	-	979	-	-
2491 WOOD MANUFACTURES, NEC	4,046	3,297	740	-	3	-	-	-
2511 FURNITURE AND FIXTURES	2,007	1,071	137	6	381	197	203	-
2611 PULP	407,702	4,063	332,394	-	-	60,420	902	1,790
2621 STANDARD NEWSPRINT PAPER	160	-	160	-	-	-	-	-
2631 PAPER AND PAPERBOARD	306,577	607	203,700	-	184	9,192	92,021	847
2691 PULP AND PAPER PRODUCTS, NEC	6,996	912	5,858	-	183	-	43	-
2711 PRINTED MATTER	191	118	73	-	-	-	-	-
2810 SODIUM HYDROXIDE	99,602	-	-	99,602	-	-	-	-
2811 CRUDE TAR, OIL, GAS PRODUCTS	42,656	10,073	1	29,172	-	3,410	-	-
2812 DYES, PIGMENT, TANNING MATS	390	360	30	-	-	-	-	-
2813 ALCOHOLS	9,910	-	-	9,910	-	-	-	-
2816 RADIOACTIVE MATERIALS, WASTES	9	9	-	-	-	-	-	-
2818 SULPHURIC ACID	71	-	-	-	-	-	71	-
2819 BASIC CHEMICALS AND PROD, NEC	156,304	30,376	14,003	89,669	17	136	61	-
2821 PLASTIC MATERIALS	13,291	1,309	11,982	-	-	-	-	-

TABLE B-6--Continued

SAVANNAH HARBOR, GEORGIA--CONTINUED

FREIGHT TRAFFIC, 1975--CONTINUED

(SHORT TONS)

COMMODITY	TOTAL	FOREIGN		DOMESTIC				
				COASTWISE		INTERNAL		LOCAL
		IMPORTS	EXPORTS	RECEIPTS	SHIPMENTS	RECEIPTS	SHIPMENTS	
2822 SYNTHETIC RUBBER	310	11	299	-	-	-	-	-
2823 SYNTHETIC (MAN-MADE) FIBERS	6,996	4,135	2,861	-	-	-	-	-
2831 DRUGS	1,300	1,039	232	-	29	-	-	-
2841 SOAP	730	73	626	-	31	-	-	-
2851 PAINTS	160	65	86	-	-	-	9	-
2861 GUM AND WOOD CHEMICALS	95,098	2,767	90,503	-	125	1,703	-	-
2871 NITROGENOUS CHEM FERTILIZERS	28,342	-	24,300	4,042	-	-	-	-
2873 PHOSPHATIC CHEM FERTILIZERS	817	-	817	-	-	-	-	-
2876 INSECTICIDES, DISINFECTANTS	1,486	19	1,467	-	-	-	-	-
2879 FERTILIZER AND MATERIALS, NEC	43,976	41,326	2,290	-	-	360	-	-
2891 MISCELLANEOUS CHEMICAL PROD	9,850	3,012	6,740	-	8	-	90	-
2911 GASOLINE	699,423	-	-	686,368	7,136	-	5,919	-
2912 JET FUEL	2,187	-	-	2,187	-	-	-	-
2913 KEROSENE	22,066	-	-	22,066	-	-	-	-
2914 DISTILLATE FUEL OIL	431,901	21,876	-	287,864	108,000	-	7,010	7,133
2915 RESIDUAL FUEL OIL	1,212,806	797,502	-	60,792	62,369	-	69,113	220,093
2916 LUBRICATING OILS AND GREASES	27,954	29	230	27,627	-	-	68	-
2917 NAPHTHA, PETROLEUM SOLVENTS	96,538	-	-	92,440	4,098	-	-	-
2918 ASPHALT, TAR, AND PITCHES	306,343	-	-	176,917	122,699	-	-	6,727
2920 COKE, PETROLEUM COKE	698	-	-	-	-	-	698	-
2951 ASPHALT BUILDING MATERIALS	198	198	-	-	-	-	-	-
2991 PETROLEUM AND COAL PROD, NEC	97	35	62	-	-	-	-	-
3011 RUBBER AND MISC PLASTICS PROD	10,030	8,507	334	-	130	-	1,059	-
3111 LEATHER AND LEATHER PRODUCTS	6,203	5,983	21	-	-	199	-	-
3211 GLASS AND GLASS PRODUCTS	2,339	1,700	569	-	39	9	22	-
3241 BUILDING CEMENT	122,806	21,328	7	91,471	10,000	-	-	-
3251 STRUCTURAL CLAY PRODUCTS	5,984	684	5,149	-	44	-	107	-
3281 CUT STONE AND STONE PRODUCTS	2,273	2,273	-	-	-	-	-	-
3291 MISC NONMETALLIC MINERAL PROD	12,370	3,930	1,309	-	1	1,750	5,701	-
3311 PIG IRON	29,301	29,301	-	-	-	-	-	-
3313 COKE, PET ASPHALTS, SOLVENTS	100,288	100,264	24	-	-	-	-	-
3314 IRON AND STEEL PRIMARY FORMS	236	236	-	-	-	-	-	-
3315 IRON, STEEL SHAPES, EXC SHEET	88,358	73,998	79	43	-	204	14,034	-
3316 IRON AND STEEL PLATES, SHEETS	61,200	45,163	1,931	-	-	5,036	9,920	-
3317 IRON AND STEEL PIPE AND TUBE	21,334	18,969	490	-	83	8	1,784	-
3318 FERROALLOYS	8,064	1,896	2,822	-	-	3,346	-	-
3319 IRON AND STEEL PRODUCTS, NEC	14,282	12,957	257	99	-	175	794	-
3321 NONFERROUS METALS, NEC	2,184	1,309	817	-	35	-	23	-
3322 COPPER ALLOYS, UNWORKED	23,285	22,577	708	-	-	-	-	-
3323 LEAD AND ZINC, UNWORKED	1,303	1,102	201	-	-	-	-	-
3324 ALUMINUM AND ALLOYS, UNWORKED	3,976	1,880	2,096	-	-	-	-	-
3411 FABRICATED METAL PRODUCTS	62,535	33,679	6,924	-	1,130	6,073	14,748	-
3511 MACHINERY, EXCEPT ELECTRICAL	99,612	31,309	62,657	3	81	1,009	3,679	60
3611 ELECTRICAL MACH AND EQUIP	10,167	5,910	3,478	-	2	-	777	-
3711 MOTOR VEHICLES, PARTS, EQUIP	27,667	16,413	11,009	-	76	64	65	-
3721 AIRCRAFT AND PARTS	483	6	477	-	-	-	-	-
3731 SHIPS AND BOATS	395	47	257	-	1	90	-	-
3791 MISC TRANSPORTATION EQUIPMENT	10,843	8,079	612	-	18	134	2,000	-
3811 INSTR, TIME, PHOTO, OPT GOODS	627	310	317	-	-	-	-	-
3911 MISC MANUFACTURED PRODUCTS	5,563	4,894	263	-	-	10	396	-
4011 IRON AND STEEL SCRAP	90,296	-	90,296	-	-	-	-	-
4012 NONFERROUS METAL SCRAP	60,358	56,785	3,273	-	-	300	-	-
4022 TEXTILE WASTE, SCRAP, SWEEP.	9,700	740	8,960	-	-	-	-	-
4024 PAPER WASTE AND SCRAP	25,665	6,540	19,125	-	-	-	-	-
4029 WASTE AND SCRAP, NEC	400	-	-	-	-	400	-	-
4111 COMMODITIES, NEC	8,934	1,799	48	1,108	814	1,130	3,331	704
9999 DEPARTMENT OF DEFENSE AND SEC	250	-	250	-	-	-	-	-
TOTAL TON-MILES. 144,206,938.								

Source: Waterborne Commerce Statistics of the United States, 1975 data. There were two primary considerations which led to this decision. First, the Bureau of Economic Analysis (BEA) earnings and income data collection program was not begun until 1964. Data for the 1950, 1959, and 1962 benchmarks had to be gathered from records retained for those years. This did not pose a serious problem for the 1962 benchmark, but did for the 1959 benchmark and especially the 1950 benchmark because of the limited amount of data available to formulate the estimates. The second primary consideration was the availability of annual data. The correlation and regression procedures are designed to examine variations in the dependent variable as related to variations in the selected independent variable. Because BEA data on earnings are not available for all years, it is necessary to use growth tables to estimate many years. Growth tables assume uniform (geometric) growth over a time period and thus yearly variations are lost. This is a problem for earlier years and the years 1962 through 1967, but without using historical data for the 1962 through 1967 years, there would be an inadequate number of years to correlate. This consideration, plus the greater reliability of the 1962 benchmark, led to the conclusion that data for the years 1962 through 1975 should be used in the correlation analysis.

43. The correlation analysis generated a linear equation which represented the closest fit between the trend lines of historical commodity tonnages and their related indicators. If the Index of Determination, r^2, which indicates the closeness of the fit was acceptable, then future tonnage projections were determined by substituting the values of the projected indicators into the equation. In each instance where the projection methodology was used, a "standard error of the estimate," hereafter denoted as SE, was calculated and examined as a percent of the tonnage given for the last year for which tonnage inputs were used. Also, in each instance where this projection methodology was used, an "F test on Index of Determination" was performed, utilizing the formula:

$$F=\frac{r^2(n-2)}{1-r^2}$$

where n refers to the number of observations, or years of historical data. This formula derives the critical ratio for testing the null hypothesis that there is no underlying relationship between the two variables under consideration. The commodities thus examined had (n-2) values, or "degrees of freedom," ranging from 9 to 12. According to statistical tables, F values in excess of 10.56 and 9.33 respectively, are sufficient to accept an underlying relationship between two variables at a 99 percent level of confidence.

44. In some instances, commodities did not move in Savannah Harbor until recent years. In these instances, regression analysis was not used, and the methodology employed was selected on the basis of available information on the given commodity movement. It is believed that in those instances where commodity group movements are relatively new (less than 10 years), previous non-movement reflects location changes, changes in relative rate structures for a particular commodity, changes in availability of unloading and loading facilities, and changes in other necessary transportation facilities, rather than changes in the relationships between commodity groups and industrial activity as reflected by various economic indicators. In those instances where a clear-cut connection between a commodity group and an appropriate economic indicator could be distinguished, project growth rates for the appropriate economic indicator were applied. If no such clear-cut connection was apparent, appropriate commodity averages for recent years were used and held constant over a 50-year project-life period. In some instances the latter approach may be considered extremely conservative.

GENERAL CARGO

45. Pulp and Paperboard. The pulp and paperboard commodities exported through Savannah Harbor originate primarily from the BEA Savannah Economic Area. This finding was borne out by correlation of pulp and paperboard tonnages with Earnings in Paper and Allied Products in the Savannah Economic Area. The r^2 value obtained was .85. Table B-7 shows historical and projected Savannah Harbor tonnages in pulp and paperboard. (SE is 10.3 percent of 1975 tonnage and F value is 68.0)

TABLE B-7
PULP AND PAPERBOARD TONNAGES
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages	Earnings in Paper and Allied Products Savannah Economic Area
1962	271,538	45,563,000
1963	151,796	46,716,000
1964	170,239	47,898,000
1965	286,466	49,110,000
1966	301,890	50,352,000
1967	345,002	51,626,000
1968	404,550	52,937,000
1969	410,252	56,279,000
1970	539,505	55,301,000
1971	497,523	56,000,000
1972	430,077	57,804,000
1973	501,716	59,814,000
1974	645,317	62,398,000
1975	601,573	65,094,000
1980	1,014,530	80,400,000
1990	1,600,770	105,400,000
2000	2,391,020	139,100,000
2010	3,272,730	176,700,000
2020	4,393,620	224,500,000
2030	5,814,660	285,100,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

46. Iron and Steel Shapes. The iron and steel shapes commodities moving through Savannah Harbor are general cargo in the Waterborne Commerce categories of 3315, 3316, 3317 and 3319, consisting of iron and steel shapes, plates, sheets, pipes, tubes, and products not elsewhere classified. These various categories correlated successfully with Savannah Economic Area Earnings in Manufacturing as reported by BEA, resulting in an r^2 value of .70. Historical and projected Savannah Harbor tonnages in these various iron and steel categories are shown in table B-8. (SE is 32.7 percent of 1975 tonnage and 17 percent of 1974 tonnages, and F value is 28.0. It is believed that the 1975 tonnages represent a slump in harbor tonnages which affected the entire nation to varying degrees.

TABLE B-8
"IRON AND STEEL SHAPES" COMMODITY GROUP
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages	Earnings in Manufacturing Savannah Economic Area
1962	57,400	128,775,000
1963	74,600	138,420,000
1964	82,472	148,788,000
1965	72,348	159,932,000
1966	70,951	171,911,000
1967	96,934	184,787,000
1968	181,574	198,634,000
1969	184,795	213,988,000
1970	156,964	208,792,000
1971	246,347	211,483,000
1972	260,873	236,250,000
1973	306,022	242,377,000
1974	287,351	251,830,000
1975	153,500	261,651,000
1980	363,420	316,900,000
1990	579,777	444,100,000
2000	1,006,030	604,700,000
2010	1,159,110	784,700,000
2020	1,555,090	1,017,500,000
2030	2,070,300	1,320,400,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

47. Basic Textiles. The basic textile commodities imported into Savannah Harbor are used primarily in North Carolina and South Carolina. Historical tonnages through 1974 correlated successfully with Textile Earnings in those states (combined) and resulted in an r^2 value of .85. Inclusion of 1975 tonnages and earnings yields an r^2 value of .66. Although 1975 cannot be considered a typical year, it was decided to level off projected tonnages at the level projected for 1980 (by inclusion of the 1975 tonnages) as a compromise measure. Historical and projected Savannah Harbor tonnages in basic textile commodities are shown in table B-9. (Using 1974 tonnages, excluding 1975 tonnages, SE was 6.7 percent of 1974 tonnages and F value was 65.4. Using 1975 tonnages, SE is 19.4 percent of 1975 tonnages and F value is 9.39.)

TABLE B-9
BASIC TEXTILES
SAVANNAH HARBOR, GEORGIA
1962-1975 AND PROJECTED YEARS

Year	Tonnages	Textile Earnings North and South Carolina
1962	98,300	1,593,073,000
1963	143,400	1,681,329,000
1964	159,000	1,774,811,000
1965	150,300	1,872,785,000
1966	163,700	1,976,526,000
1967	164,000	2,086,034,000
1968	204,900	2,201,505,000
1969	200,400	2,254,400,000
1970	177,300	2,192,750,000
1971	197,800	2,224,114,000
1972	220,500	2,359,562,000
1973	213,700	2,430,349,000
1974	202,800	2,503,267,000
1975	135,300	2,565,600,000
1980	232,900	2,901,700,000
1990	232,900	3,630,200,000
2000	232,900	4,493,700,000
2010	232,900	5,419,000,000
2020	232,900	6,533,600,000
2030	232,900	7,878,900,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

48. Fabricated Metal Products. Fabricated metal products moving through Savannah Harbor were correlated with manufacturing earnings in the Savannah Economic Area. The resulting r^2 value was .90 and regression analysis was used for projection purposes. Table B-10 shows historical and projected fabricated metal tonnages. (SE is 10.9 percent of 1975 tonnage and F value is 77.5)

TABLE B-10
FABRICATED METAL PRODUCTS
SAVANNAH HARBOR, GEORGIA
1965-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages	Manufacturing Earnings Savannah Economic Area
1965	26,600	159,932,000
1966	28,200	171,911,000
1967	51,300	184,787,000
1968	57,000	198,634,000
1969	66,400	213,988,000
1970	81,400	208,792,000
1971	67,900	211,483,000
1972	107,200	236,250,000
1973	110,800	242,377,000
1974	165,600	251,830,000
1975	135,800	261,651,000
1980	213,200	316,900,000
1990	374,200	444,100,000
2000	577,300	604,700,000
2010	805,100	784,700,000
2020	1,099,600	1,017,500,000
2030	1,432,800	1,320,400,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

LIQUID BULK

49. Distillate and Residual Fuels and Naptha. Distillate and residual fuel and naptha products are imports, and they are primarily distributed within a 100-mile radius of Savannah for use in manufacturing, while most other parts of Georgia are served by pipeline. Tonnages in this commodity group were correlated successfully with Manufacturing Earnings in the Savannah Economic Area, resulting in an r^2 value of .65. In order to be conservative, it was decided to level off projected imports after 1990. Historical and projected tonnages in this commodity group are shown in Table B-11. (SE is 25.6 percent of 1975 tonnage and F value is 22.6.)

TABLE B-11
DISTILLATE AND RESIDUAL FUELS AND NAPTHA
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages	Manufacturing Earnings Savannah Economic Area
1962	807,312	128,775,000
1963	775,019	138,420,000
1964	722,700	148,788,000
1965	739,476	159,932,000
1966	829,394	171,911,000
1967	1,026,812	184,787,000
1968	1,248,441	198,634,000
1969	1,243,882	213,988,000
1970	1,520,681	208,792,000
1971	1,921,606	211,483,000
1972	2,109,558	236,250,000
1973	2,624,112	242,377,000
1974	1,835,731	251,830,000
1975	1,423,899	261,651,000
1980	2,684,100	316,900,000
1990	4,104,769	444,100,000
2000	4,104,769	604,700,000
2010	4,104,769	784,700,000
2020	4,104,769	1,017,500,000
2030	4,104,769	1,320,400,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

50. Sodium Hydroxide. Sodium hydroxide is imported through Savannah Harbor and is used almost exclusively in paper manufacturing. This liquid bulk commodity did not begin moving in Savannah Harbor until 1971; therefore, a historical correlation analysis would be unrealistic. Instead, the BEA projected growth rate for Earnings in Paper and Allied Products within the Savannah Economic Area was applied to 1975 sodium hydroxide tonnages to project future tonnages. Historical and projected sodium nydroxide tonnages for Savannah Harbor are shown in Table B-12.

TABLE B-12
SODIUM HYDROXIDE
SAVANNAH HARBOR, GEORGIA
1971-1975 AND SELECTED PROJECTED YEARS

Year	Tonnage	Earnings in Paper and Allied Products Savannah Economic Area
1971	99,400	56,000,000
1972	144,600	57,804,000
1973	164,200	59,814,000
1974	141,900	62,398,000
1975	99,900	65,094,000
1980	123,400	80,400,000
1990	161,800	105,400,000
2000	213,500	139,100,000
2010	271,200	179,699,000
2020	344,600	224,500,000
2030	437,600	285,115,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

51. Gasoline. Local sources at Colonial Oil Company report that gasoline imported through Savannah Harbor is distributed almost exclusively within a 100-mile radius of Savannah. All other parts of Georgia are reportedly served by pipeline. Attempts were made to correlate historical harbor gasoline tonnages with Personal Income in the State of Georgia and in the Savannah Economic Area without success, probably because of the erratic tonnage movements which have occurred since 1971. It was therefore necessary to derive and use a relatively typical average annual tonnage for projection purposes. Examination of historical averages for various combinations of years resulted in the use of an average annual tonnage representing the years 1962 through 1975. This average tonnage was projected to remain constant throughout a fifty-year period, a very conservative assumption in view of energy needs. Table B-13 contains historical and projected gasoline tonnages for Savannah Harbor.

TABLE B-13
GASOLINE
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	771,900
1963	710,700
1964	548,600
1965	666,200
1966	670,600
1967	688,700
1968	701,300
1969	704,800
1970	798,900
1971	794,500
1972	748,000
1973	733,400
1974	787,807
1975	693,494
1980	715,000
1990	715,000
2000	715,000
2010	715,000
2020	715,000
2030	715,000

Source: Waterborne Commerce Statistics and computations indicated in text.

52. Liquid Sulfur. Southern States Phosphate Fertilizer is a local company which uses some liquid sulfur and distributes a great deal more. This product is distributed primarily within a 150-mile radius of Savannah Harbor. Although some is used in the manufacture of rayon in tires, it is primarily used to make sulfuric acid. Efforts to correlate historical tonnages with Manufacturing Earnings in the Savannah Economic Area were unsuccessful, as were efforts to correlate with Chemical Earnings in the Savannah Economic Area. It was therefore necessary to derive a meaningful annual average of historical harbor tonnages for projection purposes. Greater consistency in 1970 to 1975 tonnages precipitated a decision to use a six-year average representing that period of time of 140,000 tons, and to hold this tonnage constant throughout project life. Historical and projected tonnages for Savannah Harbor are shown in Table B-14.

TABLE B-14
LIQUID SULFUR
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	154,300
1963	38,600
1964	113,200
1965	113,200
1966	59,300
1967	95,900
1968	134,200
1969	137,000
1970	148,400
1971	144,900
1972	136,300
1973	154,300
1974	133,900
1975	115,000
1980	140,000
1990	140,000
2000	140,000
2010	140,000
2020	140,000
2030	140,000

Source: Waterborne Commerce Statistics and computations indicated in text.

53. Crude Petroleum. All crude petroleum imported into Savannah Harbor goes to American Oil Company and is refined there into asphalt. This asphalt is used in the construction of roads, highways, buildings, etc. Petroleum Refining Earnings in the Savannah Economic Area are not available because of disclosure problems for American Oil Company, the only company involved. Correlation therefore could not be used as a projection tool. Historical tonnages in the harbor for this commodity are very erratic. It was decided to use average annual tonnages for the period 1962 through 1975, rounded to 275,000 tons per year throughout project life, since 1971-1975 tonnages appear to be atypical: Historical and projected tonnages for this commodity movement in Savannah Harbor are shown in Table B-15.

TABLE B-15
CRUDE PETROLEUM
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	261,400
1963	196,100
1964	177,300
1965	227,400
1966	267,100
1967	156,000
1968	197,200
1969	209,800
1970	360,800
1971	161,600
1972	18,900
1973	8,000
1974	913,100
1975	673,100
1980	275,000
1990	275,000
2000	275,000
2010	275,000
2020	275,000
2030	275,000

Source: Waterborne Commerce Statistics and computations indicated in text.

54. Asphalt, Tar, and Pitches. This commodity group, according to representatives of the Chevron Company, is imported and distributed all over Georgia and Southern South Carolina for use in road construction. Efforts to correlate historical harbor tonnages with Earnings in Contract Construction in Georgia were not successful. Investigation of historical harbor tonnages revealed that this commodity category was changed in terms of classification by the Waterborne Commerce people in 1965. The 1962 through 1964 tonnages appear atypically high, probably because of this change, even though attempts were made to adjust tonnages by changing classifications. It was therefore decided to derive an average of the 1965 through 1975 tonnages and project this annual average as a constant throughout a fifty-year period. Historical and projected Savannah Harbor tonnages for this commodity group are shown in Table B-16.

TABLE B-16
ASPHALT, TAR, AND PITCHES
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	375,200
1963	354,200
1964	382,000
1965	290,100
1966	287,200
1967	131,900
1968	157,300
1969	229,700
1970	100,300
1971	173,900
1972	281,200
1973	285,500
1974	375,700
1975	299,600
1980	237,000
1990	237,000
2000	237,000
2010	237,000
2020	237,000
2030	237,000

Source: Waterborne Commerce Statistics and computations indicated in text.

DRY BULK

55. Kaolin Clay. Most of the kaolin clay exported through Savannah Harbor is mined in the Macon Economic Area. Historical tonnages moving through Savannah were therefore correlated with Mining Earnings in that area, with a resulting r^2 of .90. Regression analysis was therefore used to project kaolin exports. Table B-17 shows historical and projected clay tonnages for Savannah Harbor. (SE is 12.2 percent of 1975 tonnage and F value is 109.)

TABLE B-17
KAOLIN CLAY
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages	Earnings in Mining Macon Economic Area
1962	105,000	13,361,000
1963	110,000	14,123,000
1964	135,700	14,928,000
1965	145,200	15,778,000
1966	203,100	16,677,000
1967	218,000	17,628,000
1968	374,100	18,639,000
1969	321,000	19,841,000
1970	508,000	20,932,000
1971	500,900	22,439,000
1972	523,500	23,590,000
1973	605,800	24,800,000
1974	656,440	26,073,000
1975	519,449	27,410,000
1980	986,900	35,200,000
1990	1,450,500	46,500,000
2000	1,971,500	59,200,000
2010	2,517,200	72,500,000
2020	3,185,900	88,800,000
2030	4,006,500	108,800,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated indicated in text.

56. Gypsum. Historical Savannah Harbor gypsum tonnages are erratic. This commodity is imported from overseas and unloaded at Georgia Pacific and National Gypsum for a wide variety of uses, primarily construction. Gypsum wallboard, because of its fire-resistant qualities and increasing emphasis on fire resistance in building codes, is becoming an increasingly important component in the building materials spectrum. After contact with large gypsum distributors and a key representative of the U.S. Department of Housing and Urban Development, it was determined that new housing and other construction starts in the Southeastern United States may be reasonably projected to increase at an average annual rate of 3.4 percent per year, and that this growth rate may appropriately be applied to gypsum imports at Savannah Harbor. It should further be noted that BEA projections of Earnings in Contract Construction from 1980 to 2020 in the State of Georgia show an average annual growth rate of 3.4 percent. Historical and projected gypsum import tonnages for Savannah Harbor are shown in Table B-18.

TABLE B-18
GYPSUM
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	322,700
1963	223,900
1964	308,500
1965	364,500
1966	315,100
1967	249,700
1968	521,500
1969	455,400
1970	503,400
1971	584,000
1972	616,500
1973	672,700
1974	628,700
1975	569,221
1980	672,800
1990	939,900
2000	1,313,100
2010	1,834,400
2020	2,562,800
2030	3,580,200

Source: Waterborne Commerce Statistics, BEA, U.S. Department of Housing and Urban Development, U.S. Gypsum Company, and computations as indicated in text.

57. Coke, Petroleum Asphalts and Solvents. *Waterborne Commerce* commodity group 3313 is actually classified by U.S. Customs and is extremely difficult to isolate with regard to origin, destination, or markets. The consensus of local port officials is that this group movement through Savannah Harbor is primarily coke, a dry bulk commodity. The group has been moving through Savannah since 1967; therefore, the period of historical tonnages is too short for correlation-regression analysis to be appropriate. Nor is it clear that any connection exists with any specific BEA economic indicator. Historical tonnages have been somewhat erratic, although a general upward trend is apparent. The 1967 through 1975 average annual tonnage is 140,000. It was decided to assume that this tonnage will remain constant throughout project life. Historical and projected tonnages for this commodity group are shown in Table B-19.

TABLE B-19
COKE, PETROLEUM ASPHALTS AND SOLVENTS
SAVANNAH HARBOR, GEORGIA
1967-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1967	129,400
1968	106,700
1969	117,800
1970	131,200
1971	106,900
1972	176,000
1973	131,100
1974	262,200
1975	100,288
1980	145,000
1990	140,000
2000	140,000
2010	140,000
2020	140,000
2030	140,000

Source: *Waterborne Commerce Statistics* and computations indicated in text.

58. Building Cement. Portland cement is a dry bulk commodity distributed throughout the State of Georgia and a small part of South Carolina by Atlantic Cement Company. The material is brought into Savannah from Ravena, New York, and also from Spain. This commodity did not correlate successfully with Contract Construction Earnings in Georgia, and could not be appropriately correlated with Savannah Economic Area data because this resulted in lower 1980 BEA Earnings projections than the latest reported BEA 1973 Earnings. It was therefore decided to use a 1970 through 1975 average annual tonnage and to project that this tonnage will remain constant throughout project life. It should be noted that the 1970 through 1975 average was used because historical Savannah Harbor tonnages appear to indicate a general upward trend. Historical and projected Savannah Harbor building cement tonnages are shown in Table B-20.

TABLE B-20
BUILDING (PORTLAND) CEMENT
SAVANNAH HARBOR, GEORGIA
1962-1975 AND SELECTED PROJECTED YEARS

Year	Tonnages
1962	1,200
1963	83,700
1964	130,000
1965	228,800
1966	202,100
1967	208,700
1968	172,800
1969	133,900
1970	118,000
1971	153,700
1972	273,400
1973	380,900
1974	198,000
1975	122,806
1980	208,000
1990	208,000
2000	208,000
2010	208,000
2020	208,000
2030	208,000

Source: Waterborne Commerce Statistics, BEA, and computations indicated in text.

59. Summary. For purposes of analysis in terms of vessel traffic, it is useful to summarize Savannah Harbor tonnage in terms of likely vessel types, such as general cargo (including containerships), liquid bulk, and dry bulk vessels. Table B-21 contains a summary of the fourteen commodity types just discussed for the years, 1975, 1980, 1990, 2000, 2010, 2020, and 2030 by vessel type. These tonnages represent approximately 85 percent of the total 1974 harbor tonnages and 81 percent of the 1975 harbor deep draft tonnage.

60. Since the tonnages by vessel type in Table B-21 represent the fourteen major commodity groups analyzed, a realistic estimate of deep draft harbor tonnages for 1975 by vessel type may be derived by prorating the remaining tonnages among vessel types as indicated by the fourteen major groups representing approximately 81 percent of deep draft totals for the harbor. Total deep draft tonnages by vessel type as thus derived are given in Table B-22.

TABLE B-21

SUMMARY OF MAJOR COMMODITY-GROUP MOVEMENTS BY VESSEL TYPE
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS
(THOUSANDS OF TONS)

	1975	1980	1990	2000	2010	2020	2030
General Cargo:							
Pulp and Paperboard	601.6	1014.5	1600.8	2391.0	3272.7	4393.6	5814.7
Iron and Steel Shapes	153.5	363.4	579.8	1006.0	1159.1	1555.1	2070.3
Basic Textiles	135.3	232.9	232.9	232.9	232.9	232.9	232.9
Fabricated Metal Prod.	135.8	213.2	374.2	577.3	805.1	1099.6	1432.8
Subtotals	(1026.2)	(1824.0)	(2787.7)	(4207.2)	(5469.8)	(7281.2)	(9550.7)
Liquid Bulk:							
Distillate & Residual Fuel & Naptha	1423.9	2684.1	4104.8	4104.8	4104.8	4104.8	4104.8
Sodium Hydroxide	99.9	123.4	161.8	213.5	271.2	344.6	437.6
Gasoline	693.5	715.0	715.0	715.0	715.0	715.0	715.0
Liquid Sulfur	115.0	140.0	140.0	140.0	140.0	140.0	140.0
Crude Petroleum	673.1	275.0	275.0	275.0	275.0	275.0	275.0
Asphalt, Tar and Pitches	299.6	237.0	237.0	237.0	237.0	237.0	237.0
Subtotals	(3305.0)	(4174.5)	(5633.6)	(5685.3)	(5743.0)	(5816.4)	(5909.4)
Dry Bulk:							
Kaolin Clay	519.4	986.9	1450.5	1971.5	2517.2	3185.9	4006.5
Gypsum	569.2	672.8	939.9	1313.1	1834.4	2562.8	3580.2
Coke, Petroleum Asphalts and Solvents	100.3	140.0	140.0	140.0	140.0	140.0	140.0
Building Cement	122.8	208.0	208.0	208.0	208.0	208.0	208.0
Subtotals	(1311.7)	(2007.7)	(2738.4)	(3632.6)	(4699.6)	(6096.7)	(7934.7)
TOTALS	5642.9	8006.2	11,159.7	13,525.1	15,912.4	19,194.3	23,394.8

1/ This table of 14 major commodity groups represents 81 percent of total oceangoing deep draft harbor traffic. This table includes traffic outside the project area but excludes all local movements.

Source: See Text

TABLE B-22
TOTAL DEEP DRAFT SAVANNAH HARBOR TONNAGES BY VESSEL TYPE
1975 AND PROJECTED YEARS
(THOUSANDS OF TONS)

	1975	1980	1990	2000	2010	2020	2030
General Cargo	1,266.9	2,251.9	3,441.6	5,194.1	6,752.8	8,989.1	11,791.0
Liquid Bulk	4,080.2	5,153.7	6,955.1	7,018.9	7,090.1	7,180.8	7,295.6
Dry Bulk	1,619.4	2,478.6	3,380.7	4,484.7	5,802.0	7,526.8	9,795.9
Total harbor tonnages	6,966.5	9,884.2	13,777.4	16,697.7	19,644.9	23,696.7	28,882.5

Source: See text.

61. This Waterway Commerce analysis has attempted to group major commodity movements through Savannah Harbor in accordance with vessel type and market distribution, then to project future deep draft tonnage levels utilizing correlation-regression analysis where appropriate for projection purposes. In those instances where application of correlation analysis was not successful, appropriate averages of historical tonnages were selected and held constant throughout project life. In two instances commodity group tonnage growth was levelled off at some future date. The latter approaches were chosen because of the inherent conservatism involved. The next portion of Section B will attempt to associate present and potential tonnages with present and potential vessel fleet characteristics.

VESSEL ANALYSIS

62. This part of Section B contains the development of the composition of the existing and projected Savannah Harbor oceangoing-vessel fleets needed to estimate the savings to shippers which can be attributed to harbor widening. The analysis begins with a summation of the world fleet of passenger and cargo vessels, freighters, bulk carriers, and tanker vessels as of 1972. From there, the analysis covers detailed characteristics of vessels actually calling at Savannah Harbor in Calendar Year 1975. Data are presented in terms of vessel type and characteristics, both current and future. Special attention is given in the concluding paragraphs to safety criteria as related to present and potential harbor traffic. These safety criteria are included for information purposes only and will not be used in the derivation of project benefits.

63. The world fleet. Much information is available indicating historical trends in the average sizes of various types of oceangoing vessels in the world fleet. The Charleston Harbor, South Carolina, Feasibility Report published in recent years by the U.S. Army Corps of Engineers makes an admirable effort to describe historical trends in terms of tankers, containerships, and dry bulk carriers. These trends are definitely indicative of increasing sizes and are considered applicable to this study. Table B-23, taken from a recently published Maritime Administration study, shows the 1972 composition of the world fleet, by country of registration, and by number, percent, age, speed, and draft for Combination Passenger and Cargo, Freighters, Bulk Carriers, and Tankers. It is noteworthy that the arithmetic averages derived in this table to represent "average" bulk carriers and tankers on a worldwide basis are typical of vessels now utilizing Savannah Harbor at costs which could be reduced by channel widening.

TABLE B-23

WORLD TOTAL - ALL TYPES

OCEANGOING MERCHANT TYPE VESSELS OF 1,000 GROSS TONS AND OVER
SHOWING NUMBER, PERCENT, AVERAGE AGE, SPEED & DRAFT BY TYPE OF VESSELS, AND COUNTRY OF REGISTRATION

As of December 31, 1972

Country of Registry	Total					Combination Passenger & Cargo					Freighters					Bulk Carriers 2/					Tankers				
	Number of Ships	Percent of Total World Fleet	Average Age	Average Speed	Average Draft	Number of Ships	Percent of Total Combination	Average Age	Average Speed	Average Draft	Number of Ships	Percent of Total Freighters	Average Age	Average Speed	Average Draft	Number of Ships	Pct. of Total Bulk Carriers	Average Age	Average Speed	Average Draft	Number of Ships	Percent of Total Tankers	Average Age	Average Speed	Average Draft
World - Total	[illegible]	100.0	[illegible]	[illegible]	[illegible]	[illegible]	100.0	[illegible]	[illegible]	[illegible]	[illegible]	100.0	[illegible]	[illegible]	[illegible]	[illegible]	100.0	[illegible]	[illegible]	[illegible]	[illegible]	100.0	[illegible]	[illegible]	[illegible]
Foreign	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
United States	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Privately-Owned	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Government-Owned	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Argentina	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brazil	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
British Colonies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bulgaria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
China (Communist)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
China (Nationalist)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cyprus	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Denmark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Finland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
France	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Germany (East)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Germany (West)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Greece	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
India	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Indonesia	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Italy	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Japan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Korea (South)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Liberia	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Netherlands	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Norway	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Panama	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Philippines	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Poland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Portugal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Singapore	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Somalia	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Spain	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sweden	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
U.S.S.R.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
United Kingdom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Yugoslavia	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
All Others 1/	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

1/ Includes the following countries with less than [illegible] merchant type ships (1,000 gross tons and over) under their registry: Albania, Algeria, Australia, Austria, Bangladesh, Belgium, Burma, Canada, Chile, Colombia, Costa Rica, Cuba, Czechoslovakia, Dominican Republic, Ecuador, Ethiopia, Ghana, Guatemala, Guinea, Honduras, Hungary, Iceland, Iran, Iraq, Ireland, Israel, Ivory Coast, Jamaica, Kenya, Korea (North), Kuwait, Lebanon, Malagasy, Malaysia, Maldives, Mexico, [illegible], Morocco, Nauru, New Zealand, Nicaragua, Nigeria, Pakistan, Peru, Romania, Saudi Arabia, Senegal, Sierra Leone, South Africa, Sudan, Switzerland, Tanzania, Thailand, Tonga, Trinidad-Tobago, Trucial States, Tunisia, Turkey, Uganda, United Arab Republic, Uruguay, Venezuela, Vietnam (South), Zaire, and Zambia.

2/ Includes Bulk/Oil, Ore/Oil, and Ore/Bulk/Oil Carriers.

NOTE: Percentage figures may not be additive due to rounding.

Source: Reproduction of page 1 of A Statistical Analysis of the World's Merchant Fleets, U.S. Department of Commerce, Maritime Administration, December 31, 1972.

64. 1975 Vessel Traffic - Savannah Harbor. An intensive study of 1975 Harbormaster Orders for the Day for Savannah Harbor provides considerable insight into traffic characteristics and patterns in the harbor. Table B-24 is a sample of the types of information obtained on all vessels and ocean barges entering the harbor in 1975. This sample page, as noted, is one of a total of 43 such detailed pages showing names of calling vessels, vessel types, where docked and any recorded shifts in docking, draft, beam, width, and last port of call. The information in this report on the 1975 Savannah Harbor fleet and traffic patterns reflects information tabulated and cross-tabulated from these pages.

65. As previously discussed in this study, there are 20 major docking areas in Savannah Harbor. The easternmost six of these are in that part of Savannah Harbor already having a controlling width of 500 feet. Traffic movements confined to these six areas will therefore not be affected by the proposed widening project. The remaining 14 docking areas, on the other hand, involve movement of traffic within the confines of a 400-foot channel. Table B-25 is a summary of vessels entering Savannah Harbor by vessel type in 1975. As may be derived from the table, 93 percent of all calling vessels entered the portion of Savannah Harbor which will be affected by widening. (Of the 121 initial dockings in unaffected areas indicated in the table, 17 vessels shifted to affected docking areas and an undetermined number of vessels entered the 400-foot channel in order to turn around.)

66. Existing and Potential Fleets. A number of tabulations indicating typical dwt's and draft ranges for various vessel types utilizing Savannah Harbor are contained in tables B-26, B-27, and B-28. A summary of the information on these various vessel types is contained in table B-29. These tables do not include information on the 39 ocean barges entering Savannah Harbor in 1975 because of limited data on drafts and widths. It should be noted, however, that some of these barges are reported to have widths of up to 120 feet and that most of the ocean barges did enter the affected portion of the harbor in 1975.

TABLE B-24
SAMPLE OF 1975 TRAFFIC STUDY DATA (PAGE 22 OF 43 PAGES)

Name of ship	Type	Date arrived	Where docked	Length (feet)	Width (feet)	Date departed	DWT	Maximum draft (feet)	Where from	Miscellaneous comments
Esso Kobe	T	7-18	Col. Oil	558	79	7-19	21,371	30.8	Aruba	
Mormacbay	GC	7-17	OT 18	483	69	7-19	N/A	N/A	N. Y.	
Christopher Lykes	GC	7-18	GCT 57	495	69	7-19	9,774	N/A	Houston	
Red Jacket	Cont	7-18	GCT 59	601	89	7-18	15,946	34.0	Baltimore	
Amoco New York	T	7-18	Amoco	523	69	7-19	16,911	30.2	--	
Torm Gunhild	GC	7-18	OT 16	480	62	7-19	12,853	30.2	Alexander	
Talamanca	GC	7-18	ITC 32/33*	456	62	7-21	5,487	24.9	--	*Shifts to ITC 41/42 7-20
Oswego Tapper	GC	7-19	OT 20	508	69	7-21	N/A	N/A	Baltimore	
Amazon Maru	Cont	7-20	ITC 37	471	69	7-22	11,999	27.6	Rio	Anchored at Bar 7-19
Bilderdyke	LASH	7-20	GCT 54/55	859	105	7-20	44,799	37.0	--	
Post Entente	N/A	7-20	GCT 50	542	--	7-21	--	--	Groton	
Spithead	GC	7-20	GCT 62	225	33	7-26	N/A	14.8	Dom Repub.	
President Johnson	Cont	7-20	GCT 59	669	92	7-21	21,050	33.1	L. A.	
Lloyd Philadelphia	GC/Cont	7-20	OT 18	479	62	7-22	N/A	29.2	N. Y.	
Nagara	GC/Cont	7-21	GCT 57	686	89	7-21	19,050	32.5	Jax	
Chieh Lai	GC	7-21	GCT 51	477	59	7-24	10,384	26.6	--	
Offin River	GC	7-21	OT 17	461	59	7-22	7,148	23.3	Norfolk	
African Comet	GC	7-21	OT 19	572	75	7-22	12,932	30.8	Charlston	
Nils Gorthon	GC	7-20	ITC 32/33*	335	52	7-25	5,709	24.9	Las Palmas	*Shifts to ITC 37 7-23
Bunga Chempaka	Bulk	7-22	GCT 54	608	85	7-23	34,201	36.4	Charleston	
Traviata	GC/Cont	7-23	GCT 57	619	66	7-23	10,493	25.9	Miami	
Torm Herdis	Bulk C	7-23	Flintkote	628	85	7-29	36,592	37.0	Turf Pt.	
American Argosy	Cont	7-24	GCT 58	662	75	7-24	15,066	25.9	Charlston	
Export Freedom	Cont	7-24	GCT 59	610	79	7-24	16,605	31.5	Phila.	
Susanne Skou	GC	7-24	OT 20	451	59	7-24	7,062	23.6	Montreal	
Export Banner	GC	7-24	GCT 55	493	72	7-25	N/A	N/A	Christobal	
Al Farwaniam	GC	7-24	OT 19	511	69	7-25	13,717	31.2	Norf.	
Lago Victoria	GC	7-27	OT 16	355	49	7-28	4,072	20.0	Balt.	
S. A. Alphen	GC	7-24	GCT 53	592	75	7-25	10,160	27.6	Nola	
Mormacpride	GC	7-25	OT 16/17	483	69	7-26	N/A	N/A	Chas.	
Leland I. Doan	T	7-25	Col. Oil*	551	69		17,549	30.5		*Shifts to Scoco(SMS) 7-25
Arctic Troll	Bulk	7-26	OT 14	601	89	7-27	32,786	37.4	Jax	
Schirokko	GC	7-27	GCT 57	383	56	7-28	5,977	21.3	Wilm.	
John B. Waterman	GC	7-27	GCT 53	564	75	7-29	N/A	N/A	Colombo	
Copiapo	GC	7-27	GCT 55	552	72	7 28	11,934	30.5	Christobal	

TABLE B-25
INITIAL DOCKING AREAS BY VESSEL TYPE
SAVANNAH HARBOR, SAVANNAH, GEORGIA
1975

Dock facility	Number dockings	Number LASH	Number container	Number genl. cargo	Number bulk	Number tanker	Number barge
Not affected by widening: 1/							
LASH	19	19	--	--	--	--	--
Standard Oil	10	--	--	--	--	7	3
Flintkote	9	--	--	--	9	--	--
Swann Oil	17	5	--	--	--	12	--
Union Oil	21	--	--	--	--	19	2
East Coast Terminals	45	--	--	24	6	15	--
Subtotals	121	24	--	24	15	53	5
Affected by widening: 2/							
ITC (Ga. Kaolin)	62	--	--	3	18	1	--
Charter Oil	1	--	--	--	--	1	--
Atlantic Cement	13	--	--	--	3	--	10
Ocean Terminal	349	--	15	315	16	3	--
Colonial Oil	71	--	--	--	--	58	13
SMS (and Scoco)	60	--	2	36	3	17	2
American Oil	71	--	--	--	--	68	3
National Gypsum	35	--	--	6	18	7	4
Garden City Terminal	650	13	247	286	59	45	--
Chevron Asphalt	1	--	--	--	--	1	--
Sugar Refinery	4	--	--	4	--	--	--
Atlantic Creosote	6	--	--	6	--	--	--
Georgia Pacific	5	--	--	3	--	--	2
Continental Can	1	--	--	1	--	--	--
Subtotals	1,329	13	264	700	117	201	34
TOTAL	1,450	37	264	724	132	254	39

1/ Seaward of Fig Island Turning Basin (Mile 13.0)
2/ Area between Fig Island Turning Basin and Garden City (Mile 13.0 to Mile 18.75)

TABLE B-26
GENERAL CARGO VESSELS, INCLUDING CONTAINERSHIPS
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS

	8750 DWT 0'-26' DRAFT	14,600 DWT 26'-32.5' DRAFT	26,300 DWT 32.5'-36' DRAFT	35,000 DWT 36'-38' DRAFT	48,500 DWT 38' and up DRAFT	Total
1975	345	537	86	16	4	988
1980	277	480	102	46	19	924
1990	250	489	159	70	30	998
2000	228	515	228	114	57	1142
2010	185	493	271	209	74	1232
2020	138	482	330	316	110	1376
2030	77	461	384	461	153	1536

Source: See text.

TABLE B-27
LIQUID BULK CARRIERS
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS

	15,000 DWT 0'-26' DRAFT	22,500 DWT 26'- 32.5' DRAFT	31,000 DWT 32.5'-36' DRAFT	41,000 DWT 36'-38' DRAFT	55,000 DWT 38' and UP DRAFT	Total
1975	14	149	72	18	1	254
1980	15	163	88	30	6	302
1990	11	183	111	57	19	381
2000	3	140	94	77	35	349
2010	-	76	76	105	45	302
2020	-	44	74	118	59	295
2030	-	29	57	128	72	286

Source: See text.

TABLE B-28
DRY BULK CARRIERS
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS

	15,000 DWT 0'-26' DRAFT	22,500 DWT 26'-32.5' DRAFT	31,000 DWT 32.5'-36' DRAFT	41,000 DWT 36'-38' DRAFT	55,000 DWT 38' and Up DRAFT	Total
1975	4	49	45	30	4	132
1980	6	64	67	51	8	196
1990	5	77	83	77	16	258
2000	3	81	104	104	32	324
2010	-	90	130	138	49	407
2020	-	91	147	188	81	507
2030	-	95	159	254	127	635

Source: See text.

TABLE B-29
TOTAL VESSELS BY DRAFT RANGE
SAVANNAH HARBOR, GEORGIA
1975 AND PROJECTED YEARS

	0'-26'	26'-32.5'	32.5'-36'	36'-38'	38' and Up	Total
1975	363	735	203	64	9	1374
1980	298	707	257	127	33	1422
1990	266	749	353	204	65	1637
2000	234	736	426	295	124	1815
2010	185	659	477	452	168	1941
2020	138	617	551	622	250	2178
2030	77	585	600	843	352	2457

Source: Previous tables.

67. In addition to 1975 vessel data, tables B-26 through B-29 contain information on anticipated fleets in Savannah Harbor, for the initial project year of 1980 and in 10-year increments through the year 2030. These vessel fleets were derived after careful consideration of potential tonnages; increasing average dead weight tons (dwt's) in future years; increasing trends in world fleet sizes within the constraints of given Savannah Harbor dimensions; increasing proportions of general cargo commodities moving in containerships; and information from the Savannah Pilots Association regarding the harbor's capabilities to handle projected traffic. It should be noted that the Pilots Association reports that the harbor could handle the projected traffic without widening, but that this will involve increases in costs to shippers associated with increasingly larger ships and traffic congestion. For purposes of this analysis, then, harbor tonnage and fleet projections remain the same both with and without the proposed widening project. The difference in "with-project" and "without-project" conditions will be reflected by greater costs to shippers and decreased harbor efficiency in the absence of the project. These greater costs are calculated in Section F as potential project benefits, in terms of increased vessel speeds and decreased operating costs.

68. Projected vessel fleets were derived individually by vessel type. Tankers and dry bulk carriers were projected by estimating the percent distribution of future fleets (in 10-year increments). These percent distributions were based on careful considerations of world fleet projections and the limitations imposed by Savannah Harbor dimensions. These distributions were then converted into a weighted average or "typical" dwt for each relevant 10-year increment. Factors of increase in these "typical"dwt's were considered representative of changes in

overall ship size and of tonnages handled per vessel. The factors were therefore applied to existing tonnages per vessel to derive future tonnages per vessel. Conversion to actual fleets (number of vessels) then became a simple matter of dividing projected tons per ship into projected tanker and dry bulk tonnages. These calculations are shown and explained in Section F.

69. General cargo vessels, because of their varying sizes and their tendencies to offload and load relatively small and highly irregular tonnages, could not be analyzed and projected realistically by this methodology. It was necessary with general cargo and container vessels to get percentage distribution of future fleets by size keeping in mind world fleet characteristics, containerization trends, and Savannah Harbor dimensions. In 1975, vessels carrying general cargo handled an average of 1,300 tons per vessel. This average is projected to increase to 7,700 by the year 2030. This trend reflects increasing tonnages, increasing ship sizes, and increasing containerization.

70. Safety. Project benefits calculated in this study do not reflect in any way the safety criteria applicable to harbor operations. However, closely related to Savannah Harbor channel widths are criteria on safety with regard to single- and double-lane traffic. Criteria regarding safe passage of vessels by width are available in Report No. 3, "Evaluation of Present State of Knowledge of Factors Affecting Tidal Hydraulics and Related Phenomena," Committee on Tidal Hydraulics, U. S. Army Corps of Engineers, May 1965. Based on the criteria set forth therein, only 8 percent of the vessels now entering the 400-foot portion of Savannah Harbor can safely double-lane, or pass, at this time, and only 83 percent of affected traffic should be entering this part of the harbor at all (see table B-30). This

means that 17 percent of the traffic now utilizing the affected 400-foot-wide portion of Savannah Harbor exceed the maximum beam criteria as derived from Report No. 3. In actual fact, according to the Savannah Pilots Association vessels up to 75 feet in width are now allowed to pass in the 400-foot portion of the harbor except in instances involving flammable or combustible commodities. However, this is done utilizing the flood tides and the empty berthing areas along the channel. No attempts are made to pass this size vessel where ships are docked alongside the channel. The larger ships are also brought in on high tides to give them as much clearance and maneuver room as possible.

71. While the harbor pilots are forced to operate under these adverse conditions, the chances for a major accident grow. As the vessels that call at Savannah continue to increase in size, the margin for error in the harbor becomes intolerably small. To maintain some degree of safety in the harbor with the increasing number and size of vessels, vessel costs will have to increase. Traffic congestion and speed reductions will increasingly hamper safe and efficient harbor operation. These effects can only be expected to increase based on existing harbor conditions.

TABLE B-30
ALLOWABLE TRAFFIC UNDER SAFETY CRITERIA[1/]
SAVANNAH HARBOR, GEORGIA
1975

1. Without project:
    - Double-lane traffic, maximum width 54 feet per vessel.
    - Single-lane traffic, maximum width 83 feet per vessel.
2. With project:
    - Double-lane traffic, maximum width 75 feet per vessel.
    - Single-lane traffic, maximum width 105 feet per vessel.
3. Impact of project:
    - Almost 60 percent of 1975 traffic could safely have double-laned in 1975 rather than 8 percent.
    - 100 percent of 1975 traffic could safely have single-laned in 1975 rather than 83 percent.

[1/] Corps' criteria cited in text.

DESCRIPTIVE PUBLICATIONS

73. There are several publications describing the economic potential of the Savannah area. Some that were used in this study are as follow:

National Register of Historic Places;

OBERS (Series E) 1972 and 1975 where available;

Qualified Areas Under the Public Works and Economic Development Act of 1965 as Amended, January 1, 1976, U.S. Department of Commerce, Economic Development Administration;

Georgia Statistical Abstract;

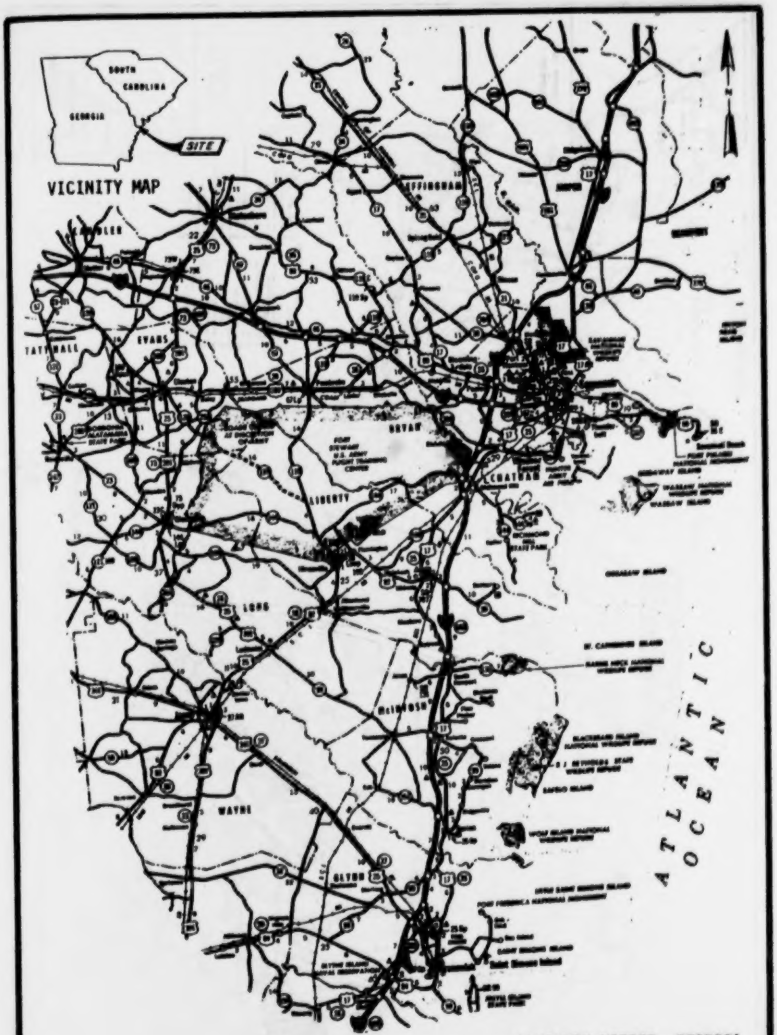
Congressional District Data Book, 93d Congress;

Waterborne Commerce Statistics, 1962-1974;

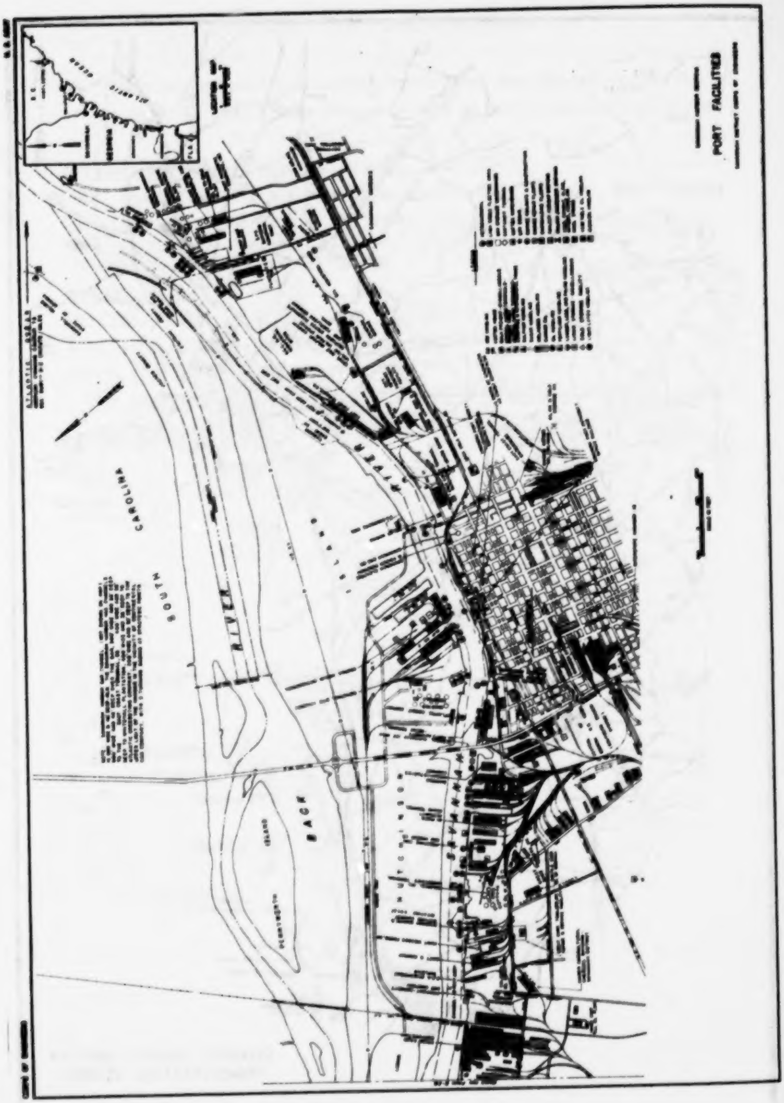
Orders for the Day, Savannah Harbormaster, 1975;

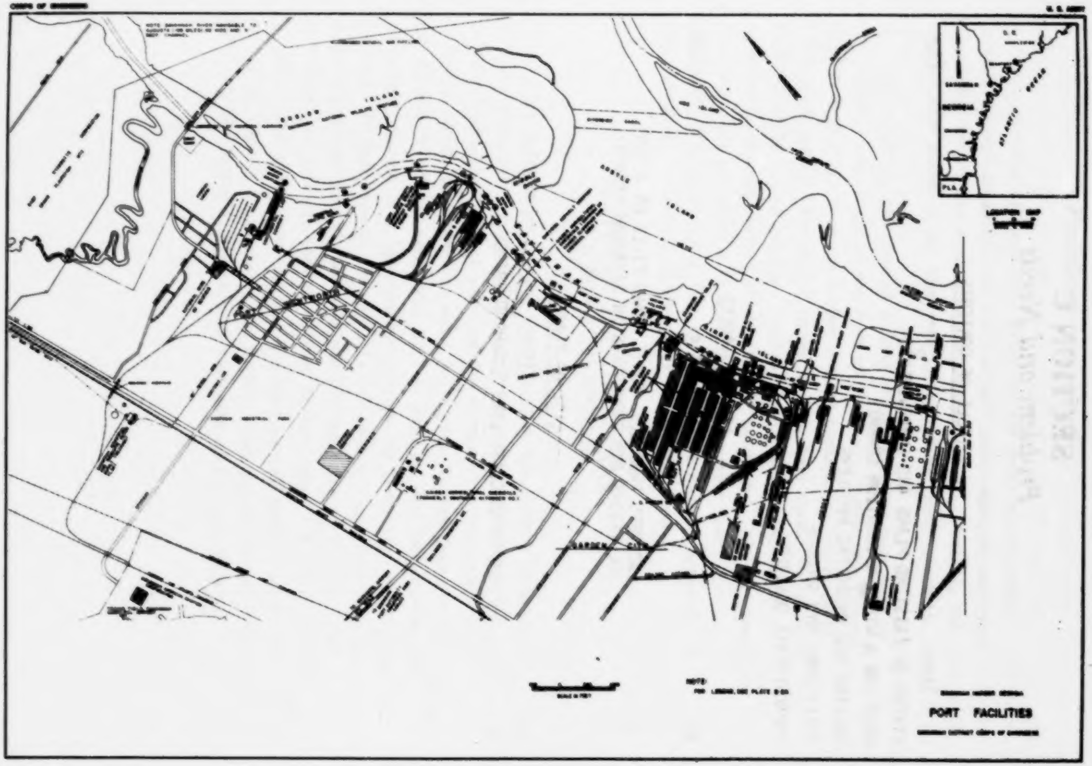
Lloyds Register of Ships, 1975-1976;

A Statistical Analysis of the World's Merchant Fleet, U.S. Maritime Administration, December 31, 1972.



SAVANNAH HARBOR, GEORGIA
TRANSPORTATION NETWORK


PORT FACILITIES
SOUTH CAROLINA
BACK RIVER
SAVANNAH RIVER


U. S. ARMY
S. C.
FLA.
ATLANTIC OCEAN
LOCATION MAP
ISLAND
GARDEN CITY
NOTE:
PORT FACILITIES

SECTION C
Problem and Needs

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Problems and Needs

1. This section of appendix 1 discusses the problems and needs associated with expanding the level of port development by modifying the harbor within the scope of the authorized study. Finally, the section also presents the improvements desired by local interests.

2. Historically, the general economy of the area has been tied to the shipping activities of the Port of Savannah. During the 12-year period, 1961-1972, Savannah Harbor's total tonnage has increased at the average annual rate of 5.7 percent. With this steady increase in harbor traffic, there has been a parallel increase in the number of larger size vessels calling at the Port of Savannah. This new generation of vessels has put added strain on the port's harbor facilities. Additional ship lines would like to establish service at Savannah, if the navigation restraints of the inner harbor are removed.

STATUS OF EXISTING PLANS AND IMPROVEMENTS

3. In the interest of commercial navigation, the Federal Government over the years has made extensive modifications to Savannah Harbor. The existing authorized project provides for a channel 40 feet deep and 600 feet wide across the ocean bar about 8.2 miles; 38 feet deep and 500 feet wide to the East Coast Terminals; 38 feet deep and 400 feet wide to the vicinity of Garden City (Georgia Ports Authority Terminal); and 36 feet deep and 400 feet wide to the vicinity of Savannah Sugar Refining Corp., about 22.5 miles; and 30 feet deep and 200 feet wide to a point 1,500 feet below the Atlantic Coastal Highway Bridge, about 1.4 miles, a total length of 32.1 miles. The project provides several turning basins for vessels at various locations in the harbor. Two turning basins, Port Wentworth and Argyle Island, are 30 feet deep by 600 feet wide by

600 feet long. Kings Island turning basin is presently 980 feet wide, 1,000 feet long, and 34 feet deep. However, recent authorization provides for the Kings Island turning basin to be enlarged to a width of 1,500 feet, a length of 1,600 feet, and a depth of 38 feet. This recent authorization also provided for the incorporation of GPA's LASH turning basin as an element of the existing Federal navigation project. This basin is 40 feet deep by 1,050 feet wide by 1,200 feet long. Two other turning basins, Marsh Island and Fig Island, are 34 feet deep by 900 feet wide by 1,000 feet long. These basins are shown on plate 1.

4. The project also provides for sediment control works consisting of a tidegate structure across Back River; a sediment basin, 40 feet deep, 600 feet wide, and about 2 miles long, with an entrance channel, 38 to 40 feet deep and 300 feet wide; a drainage canal across Argyle Island, 15 feet deep and 300 feet wide; control works and canal for supplying freshwater to the Savannah National Wildlife Refuge; and facilities to mitigate damages to presently improved areas other than refuge lands.

5. The only remaining segment to be completed is widening the bar channel from 500 to 600 feet at a depth of 40 feet; presently this work is approximately 80 percent complete. It is anticipated that the navigational channel will be completed during Calendar Year 1977 and the sediment control works is currently scheduled to become operational during Calendar Year 1976.

6. Currently, there is only one bridge across Savannah Harbor. It is the Eugene Talmadge Memorial Bridge (U. S. Route 17A), a high-level fixed span with a vertical clearance of 136.7 feet at mean high water and a width of 600 feet between piers. The former Seaboard Coast Line Railroad Bridge was struck by a vessel on the night of 23 April 1971 and collapsed. The bridge was a single-span vertical life with a single track. The bridge opening for navigational purposes was 180 feet between fenders with a vertical clearance of 135 feet above mean high water in the raised position. The Georgia Ports Authority, with funds appropriated

by the State Legislature, has had the north pier removed which made possible a 350-foot-wide navigation channel through the bridge area. Georgia Ports Authority has developed plans and will soon award a contract for removal of remaining portions of the bridge to provide a 500-foot-wide navigation channel at the bridge site.

NEED FOR A WIDER NAVIGATION CHANNEL

7. There has been a steady increase in the density of the traffic in the upper harbor due to the accelerated shipping activities. The bar pilots state that this situation has created a serious shipping hazard due to the narrowness of the present 400-foot channel. To further compound the navigation difficulties, there has been a steady increase in the average size of all vessels in the world fleet. Some of these vessels calling at the Port of Savannah are very large in size with beams in excess of 100 feet in width. These larger size vessels experience difficulty in maneuvering in these restricted waters due to their reduced handling characteristics. Bar pilots further state that the present 400-foot channel is inadequate to safely handle these larger vessels. Furthermore, owners of these larger vessels indicate that they are apprehensive about the narrow navigation channel in this section of the harbor and the navigation hazard which it presents to their vessels.

8. Due to the restrictions imposed by the narrow inner harbor channel, vessel speeds are restricted. This results in an increased transit time for those vessels that must navigate this portion of the harbor. Since 93 percent of the vessels that call at Savannah enter this portion of the harbor, the speed reduction affects most of the harbor's commerce. This speed reduction and increased transit time is reflected in the expenses of the shippers who must pay the higher operating costs. They must also pay for the additional time the assisting tugs must attend to the vessels due to the reduced speeds. These costs are, in turn, reflected in higher shipping rates to the consumers of the products. Therefore, the reduced speeds and resulting higher shipping cost are ultimately passed on to the consumers throughout the harbor's tributary area. A wider navigation channel for this portion of the harbor would result in increased vessel speeds and lower shipping costs. This in turn, would benefit the entire tributary area.

9. The lower 13 miles of the navigation channel from the Atlantic Ocean to Fig Island turning basin have an authorized minimum width of 500 feet. This reach of the harbor is mostly undeveloped. As such, the passage of vessels in the channel is not hampered. However, as the vessels near the main terminals, they are not only confronted with other ships docking and undocking and the numerous smaller vessels which must tend the larger ships, they must also contend with a more narrow waterway as the channel reduces to 400 feet in width. Due to the congestion in the inner harbor, the maneuver area of the channel should be at least as large, if not larger, than that of the approach channels. This is common in other major southeastern ports where the inner harbor navigation channels are at least as large as the approach channels. Thus, the inner harbor channel at Savannah should be at least as wide as the approach channel, especially since 93 percent of the vessels calling at Savannah enter the more restricted inner harbor channel.

DOCKING AND UNDOCKING PROBLEMS

10. Discussions with a docking master for the Atlantic Towing Company yielded information concerning the problems associated with docking and undocking vessels. Following is a resume of the navigational problems encountered and operational procedures followed by docking masters in handling vessels in the inner harbor:

- The strong ebb and flood tides associated with the narrow channel intensify the navigation hazards of docking and undocking of larger vessels at the berthing facilities. Vessels generally are compelled to dock and undock at terminals at or near slack water. Tugboats are required to either push the ship against the dock or pull the ship away from the dock during docking and undocking procedures.

- The most critical docking problem occurs in vessel mooring slips constructed at right angles to the channel. To enter these slips, the vessel must turn sideways in the channel and proceed into the slip with a minimum of lateral drift. The procedure requires constant attention by the assisting tugs. Even with tug assistance this problem is compounded by any currents in the river. Considering a cargo ship approximately 500 feet long, a considerable dam is formed across the river when the ship turns to enter the slip. This damming effect and the resultant force on the ship are proportional to the velocity of the current. This effect is obvious considering that a 500-foot-long ship is trying to turn sideways in a 400-foot-wide navigation channel of a 600- to 700-foot wide river. Therefore, docking is usually only attempted at a slack flood tide when velocities are low and with the assistance of several tugboats.

COLLISIONS AND GROUNDINGS

11. Although the frequencies of collisions and groundings in the harbor are increasing, fortunately none of these incidents have resulted in a major catastrophe or the need for extensive repairs. According to the Master Pilot of the Port of Savannah, the new generations of ships which call at the port have made piloting the larger vessels, which include container ships, LASH, tankers, and bulk carriers, "a new ball game." It has only been due to the ability of the bar pilots to handle vessels under adverse circumstances and to negotiate acceptable delays that major catastrophes have been avoided in the harbor so far. The bar pilots have already experienced some "near misses" while piloting these larger vessels in the inner harbor. Similarly, they have had some close calls concerning groundings. It has been emphasized that these incidences dramatize the need for a wider inner channel to reduce the risk of collisions and avoid costly delays to larger vessels which call at the Port of Savannah.

12. Some of the more recent collisions and groundings that have taken place in Savannah Harbor are shown in table C-2. They were documented from the files of the Savannah Coast Guard District.

TABLE C- 1 - EXCERPTS FROM U. S. COAST GUARD FILES ON RECENT COLLISIONS AND GROUNDINGS IN SAVANNAH HARBOR

Vessel	Date	Case no.	Accident description
ATHENIAN GLORY	7 Mar 72	435	Grounded in Savannah Harbor.
ORIENTAL QUEEN	3 Apr 72	441	Collision with tug SAVANNAH at GITC #37 Pier, Savannah River.
SS STEEL KING	13 Jun 72	449	Collision with SS MONA PASS in Savannah River.
TEXACO NORTH DAKOTA	17 Jul 72	452	Alleged wash damage caused in Savannah Harbor.
MV NAVIGATOR	21 Oct 72	496	Collision with Coast Guard Cutter CAPE CURRENT in Savannah River.
LASH TURKIYE	1 Jan 73	492	Collision with pier in Savannah River involving Tugs LAWTON McCALHOUN and ROBERT W. GROVES.
SS AMERICAN	4 Jan 73	491	Grounded in Savannah Harbor.
LASH Barges	10 Mar 73	493	6 barges grounded at East Coast Terminal.
Barge Adelaide	24 May 73		Grounded near Atlantic Cement Co.
Barge Alexandria	25 Jun 73	506	Struck Pier 13
Barge Alexandria	25 Jun 73	515	Struck Atlantic Cement Co. Pier
Tank Barge TG 102	14 Nov 73	536	Struck Abutment of Seaboard Coastline RR Bridge
NEA TYHI	30 Jul 74	594	Grounded near American Oil Co. dock
SS Neptune/ SS Mormacscab	9 Nov 75	690	Collision near Savannah Machine and Foundary
Barge Atlantic Seal	24 Nov 75	698	Struck Dredge Bacon and Tender Bacon
Construction Barges	18 Dec 75	55	Struck Barge Royal Sunk
Tug Pioneer and Barge 412	27 Jan 76	710	Struck U. S. Survey Boat Carlson

IMPROVEMENTS DESIRED

13. Since the Port of Savannah is important to the economy of the area, local interests are truly cognizant of its needs. The Savannah Port Authority and the Georgia Ports Authority are very active in the development of the port and are keenly interested in improvements to the harbor. At the initial public meeting held on 25 June 1970, local interests expressed a desire to have the navigation channel widened in the reach between the Fig Island turning basin and the site of the then-existing Seaboard Coast Line Railroad Bridge.

14. The scope of the study increased considerably as a result of the Seaboard Coast Line Railroad Bridge being struck by a vessel on the night of 23 April 1971 and collapsing, thus blocking the navigation channel. Subsequently, the channel was cleared to provide a horizontal clearance of 350 feet. However, shipping interests alleged that the horizontal clearance was unreasonably obstructive to navigation and the bridge should be removed in its entirety. It was for this reason that the Savannah Port Authority by letter dated 21 December 1971 asked the District Engineer to extend the scope of the initial widening study to include that portion of the harbor between the site of the former Seaboard Coast Line Railroad Bridge and the Kings Island turning basin. Subsequently, on 4 January 1972 the District Engineer requested to higher authority that the scope of the widening study be increased. This was approved by the Chief of Engineers by letter dated 13 January 1972.

15. Since that time, the Georgia Ports Authority, Savannah Port Authority, Savannah Harbor Pilots Association, the Chatham County Commissioners, and others have repeatedly gone on record requesting that the inner harbor be widened from its present 400-foot width. This would make the inner harbor channel more compatible with the 500-foot-wide lower harbor channel.

SECTION D
Formulating a Plan

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Formulating A Plan

1. The formulation portion of the study involved the establishment of the planning objectives followed by an analysis of alternative measures for fulfilling these objectives. Each alternative was subsequently screened giving consideration to its contribution towards the enhancement of the four accounts of National Economic Development (NED), Environmental Quality (EQ), Regional Development (RD), and Social Well-Being (SWB).

FORMULATION AND EVALUATION CRITERIA

2. Formulation of a plan of improvement for Savannah Harbor to meet the navigation needs of the area incorporated the use of criteria adopted in accordance with the Water Resource Council's (WRC) Principles and Standards (P&S) and other related policies. In accordance with this criteria, it was necessary to establish planning objectives for the study based on the problems and needs of the area and the scope of the authorized study. To insure uniformity in the analysis of the alternatives considered to meet these objectives, it was also necessary to establish a standard set of evaluation criteria. Such criteria, technical, economic and environmental, permit the development and selection of an alternative plan that best responds to the problems and needs of the area and fulfills the planning objectives.

PLANNING OBJECTIVES

3. Based on the scope of the study and the problems and needs of the area, the following planning objectives were established.

a. Improve navigation conditions in the harbor between Fig Island turning basin and Kings Island turning basin.

b. Reduce in-port operating costs and vessel transit times.

c. Provide for the safety of ships entering and leaving the harbor.

d. Enhance the growth and development of the port and tributary area.

e. Enhance the quality of the environment, both human and natural.

4. The national objectives which must be addressed in the development of a plan of improvement are NED and EQ. NED is achieved by increasing the value of the nation's output of goods and services and improving national economic efficiency. EQ is achieved by the management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems.

TECHNICAL CRITERIA

5. The following technical criteria were adopted for use in formulating a plan:

a. The selected plan should be consistent with local, regional, and State goals for port and industrial growth.

b. Dimensions (length and width) of the channel should be adequate to accommodate expected user vessels for the foreseeable future.

c. Adequate land should be available to accommodate the contemplated harbor modifications and for placement of dredged material.

ECONOMIC CRITERIA

6. The following economic criteria were applied in formulating the plan of improvement:

a. The proposed plan should be economically justified so that tangible benefits exceed project economic costs.

b. There should be no more economical means, evaluated on a comparable basis, of accomplishing the same purpose which would be precluded from development if the plan were undertaken. The plan resulting from application of the foregoing criteria provides a baseline for consideration of the numerous other factors which are not reflected in quantifiable economic terms, but which may warrant modification of the plan.

7. The costs for alternative plans of development were based on preliminary layouts, estimates of quantities, and July 1976 unit prices. The benefits and costs are expressed in comparable quantitative economic terms to the maximum extent possible. Annual cost and benefits are based on a 50-year period of analysis and an interest rate of 6-3/8 percent. No interest during construction was included for each element of the project, as each element could be completed within 2 years. The annual charges for the project did not include any maintenance costs since it is anticipated that none of the alternatives would cause any appreciable increase in the amount of shoaling in Savannah Harbor.

ENVIRONMENTAL AND OTHER CRITERIA

8. The following criteria were considered in the project formulation:

a. The available sources of expertise should be used to identify forms of marine life which might be endangered, damaged, or destroyed by plan implementation.

b. The use of natural resources to effect implementation of a plan should be minimized.

c. The adverse social impacts (noise, esthetic values, and health) should be minimized to the maximum possible extent.

d. Air emissions from construction of the project and any industrial growth stimulated by the project should be minimized to the maximum extent possible.

e. Measures should be incorporated into the selected plan which protect, preserve, or enhance environmental quality in the project area.

f. The adverse impacts on area recreation resources should be minimized.

g. Plans should be coordinated with interested Federal and non-Federal agencies, local groups, and individuals through cooperative efforts, conferences, public meetings, and other procedures.

POSSIBLE SOLUTIONS

9. In order to develop a suitable course of action concerning the feasibility of widening the inner harbor's 400-foot channel, it was necessary to analyze various alternative solutions with regard to their effects on existing conditions. The alternatives selected for consideration include:

A. No development alternative.

B. Nonstructural alternative of formally programming traffic movements in the harbor.

C. Alternative of constructing a barge lane on the north side of the existing channel.

D. Alternative of widening the existing channel within the scope of the authorized study.

10. The "no development" alternative (Alternative A) would consist of leaving the harbor as it currently exists, 400 feet wide between Fig Island turning basin and Kings Island turning basin. This alternative

would represent the "without project" conditions of the future. It would incur no additional Federal expenditures nor require additional Federal action.

11. Alternative B consists of adopting a system for formally programming or scheduling traffic movements in the harbor. This would not require any additional Federal expenditure. It would require some expenditures on the part of the local interests in order to set up the controlling and responsible authority. There would also have to be coordination between the local interests and the Coast Guard to insure safe and efficient operation.

12. Alternative C consists of constructing a barge lane on the north side of the existing channel. This would require minimal channel work. It would, however, involve the relocation of the facilities on the north side of the channel. This would be necessary to allow clearance for the ships that dock in the area.

13. Alternative D consists of widening the existing channel between Fig Island turning basin and Kings Island turning basin. This would require significant dredging and relocation. Most of the facilities on the northern shore of the river would require relocating to provide room for the new channel area and the new harbor line.

ALTERNATIVES CONSIDERED FURTHER

14. In order to select the alternative that best responds to problems and needs of the area, it is necessary to analyze each possible solution in terms of its fulfillment of the planning objectives and its impact on NED, EQ, RD, and SWB. The following paragraphs discuss each of the possible solutions presented earlier.

ALTERNATIVE A - NO DEVELOPMENT

15. The "no development" alternative (Alternative A) represents the "without project" conditions for the future. Based on the analysis presented in section B of appendix 1, the "no development" alternative would not directly affect the growth of the harbor or potential increases in shipping. The projected growth of the harbor and shipping was based on industrial activity and historical data. The vessels that utilize the harbor would continue to do so. As trade increased, the vessels that call at the harbor would increase in size and number. The harbor pilots, who informally program traffic movements in the harbor, would continue their operations to insure safety and minimize conflicts.

16. The continued increase in shipping in the harbor under the "no development" alternative would result in a corresponding increase in congestion and vessel transit time. This would result in an excessive rise in shipping costs which would adversely affect shippers and industry utilizing the port. Some industry might seek other ports in an effort to hold down shipping costs. New industry attempting to locate in the area would be discouraged due to the higher shipping costs involved. While most of these impacts would be of a regional nature,the increased shipping costs would have adverse impacts on the national market as well. The rise in the price of the commodities handled in the port would be passed on to consumers throughout the area of distribution, which for Savannah covers much of the Eastern United States and several foreign countries.

17. Although the harbor pilots would continue to exercise their control over traffic movements in the harbor, the chances for a serious accident would increase with the size and number of vessels. The larger the vessel, the more difficult it is to maneuver in a restricted channel. Therefore, the possibility for a serious accident would greatly increase.

18. The social impacts of Alternative A would be negligible, although there would be some minor long-term adverse impacts on the social well-being of the community due to the increased cost of commodities handled through the port. The impacts on the environment would also be negligible since nothing would be done to change things as they now exist.

ALTERNATIVE B - PROGRAMMING HARBOR TRAFFIC

19. Alternative B consists of adopting means whereby traffic movements in the harbor can be rigidly controlled. A special traffic control center would have to be established to handle the ships that call at Savannah. This traffic control center would assume the responsibility for scheduling all vessel movements in the harbor. The informal program currently conducted by the harbor pilots would be expanded to provide for a detailed scheduling of vessel arrivals and departures and shifts in location.

20. Adoption of Alternative B would not result in a substantial impact on the vessel operations currently being experienced. There would be some impacts where actual vessel arrival or departure times coincided with the scheduled times. However, due to the many variables involved in loading, unloading, and vessel transit, exact movement times are nearly impossible to establish. Therefore, delays would be inevitable. While this alternative represents an improvement over the existing conditions by increasing the control over vessel movements, it does not substantially alleviate the shipping problems currently being experienced, nor would it result in a reduction in vessel transit times.

21. The overall impacts on shipping would be similar to those of Alternative A. The larger vessels calling at the harbor would continue to experience increasing transit times even though safety conditions would be improved and vessel movements carefully controlled.

22. Economic impacts associated with Alternative B would be mainly adverse and similar to those of Alternative A. There would be no reduction in vessel transit times or tug requirements, thus allowing a continued rapid climb in shipping costs. The rise in shipping costs would also result in a rise in the price of commodities handled in the port. This rise would be passed on to consumers throughout the tributary area. There would also be an increase in the economic burden on the local government in order to provide and support the traffic control center.

23. The environmental impacts of this alternative would be negligible since no physical alterations of the harbor would be involved. The social impacts would also be mainly negligible, although there would be some minor adverse impacts associated with the increasing shipping costs through time.

ALTERNATIVE C - CONSTRUCTION OF BARGE LANE

24. Alternative C consists of constructing a barge lane adjacent to the north side of the existing navigation channel. To provide this lane, berthing facilities and the harbor line on the north side of the channel would have to be moved back to provide 125 feet (berthing area width) from the edge of the barge lane. This would affect most of the shoreline development on Hutchinson Island. Minimal dredging would be required to actually provide the lane. The main dredging involved would be found in the relocation of the berthing areas where ship channel depths would have to be provided to accommodate calling ships.

25. As previously stated, the projections of future vessel traffic in the harbor were held constant for the "with" and "without" project conditions. Therefore, potential benefits were only calculated on a reduction in vessel transit time and vessel operating expenses primarily associated with increased vessel speeds and reduced tug costs. The construction of the barge lane would provide for a reduction in the operating costs of barge traffic by allowing them to operate outside of the main ship channel.

However, the operation costs of the larger vessels would be unaffected since there would be no reduction in vessel transit time or operating expenses. Also, there would be a slight increase in congestion on the north side of the river where the berthing facilities are located. This would be due to the concentration of barge traffic in the narrow strip between the berthing area and the ship channel.

26. The overall impacts on shipping would be similar to those of Alternative A. The larger vessels calling at the port would experience increasing congestion and vessel transit times which would result in higher operating costs. There would be some beneficial impacts on barge traffic. However, these would be minor when compared to the continuing adverse conditions for the larger vessels. Those industries utilizing the barge traffic would benefit, while those relying on larger vessels would continue to suffer higher shipping costs.

27. A major adverse impact of this alternative on the economy is the construction cost involved. While the cost of the channel dredging would be minimal, the cost of relocations would be high. When analyzed with potential benefits, the costs far exceed the nominal benefits derived.

28. The social impacts of Alternative C would be similar to those for Alternative A. There would be some beneficial impacts on the area due to the construction effort. However, there would also be a substantial drain on the local economy in order to finance the project, with only minimal returns.

29. The environmental impacts of Alternative C would be adverse thouoh generally minor. The dredging activities would temporarily degrade the water quality and destroy the bottom-dwelling biota. The relocation activity would generate temporary adverse noise and esthetic impacts along with some air pollution. Other adverse impacts would be associated with the disposal of the dredged material.

ALTERNATIVE D - WIDENING THE NAVIGATION CHANNEL

30. Alternative D consists of widening the navigation channel between the Fig Island turning basin and Kings Island turning basin. This widening would be accomplished on the northern side of the existing channel and would entail the relocation of the shoreline facilities on Hutchinson Island that would be affected. In addition to the channel widening, the harbor line would have to be reestablished to provide the 125 feet necessary for the berthing areas. Since the lower harbor up to the Fig Island turning basin consists of a channel 500 feet wide, initial impact assessments were based on a similar size channel for the upper harbor.

31. The main economic impacts of this alternative are associated with the potential benefits and estimated costs. The potential benefits for widening the channel were derived from the reduction in vessel transit time and tug costs associated with the width of the channel. The wider channel would increase the operating speed and efficiency of all vessels in the harbor. It would also reduce some of the problems encountered in docking and undocking procedures.

32. The reduction in transit and operating time would result in a reduction in the shipping costs. This would have beneficial effects on not only the industry directly involved but on the consumer as well. The reduced shipping costs would eventually be passed on throughout the tributary area and market area. While there may not be a reduction in commodity price, the inflationary pressures of Alternative A would not be present.

33. In the port area, the reduction in shipping costs would stimulate the associated industrial activity which, in turn, would have beneficial impacts on the community. Also, new industry coming into the area would be encouraged by the improved navigation conditions.

34. A major adverse impact of this alternative would be the costs associated with the construction. These costs would adversely affect both the local economy and the national economy. However, there would be some indirect benefits associated with the cost of construction in terms of providing additional jobs in the port area. The construction effort would require input from several sectors of the local economy including the labor pool, private contractors, and building material suppliers.

35. The social impacts associated with Alternative D would be related to the beneficial impacts of the widening on the economic conditions of the harbor area. Increased employment and total income would have minor beneficial impacts on the area. Other effects related to the social well-being of the community would also be minor.

36. The environmental impacts of Alternative D would be mainly temporary. There would be a temporary degrading of water quality associated with the dredging activities. There would also be a temporary disruption of the biological communities located near the dredging site. There would be some temporary adverse noise pollution, esthetic degradation, and air pollution associated with the construction effort. Other impacts would be related to the disposal of the dredged material and would depend on method and location of disposal. One adverse impact that would not be temporary would be the loss of about 27 acres along the shoreline on the north side of the river.

COMPARISON OF ALTERNATIVES

37. In comparing the four alternatives, particular attention was given to each alternative's ability to fulfill the planning objectives and its impacts on the NED, EQ, RD, and SWB accounts.

38. Alternative A, no development, fails to meet any of the planning objectives. It also has negative impacts on NED and RD due to the continued increase in vessel transit times and operating costs. It has only minor impacts on SWB associated with the increasing price of commodities. Impacts on EQ are negligible.

39. Alternative B, programming harbor traffic, meets only one planning objective, that of providing for the safety of ships. It fails to fulfill any of the others. Alternative B also has negative impacts on NED and RD due to the increasing shipping costs. Minor adverse impacts on SWB are associated with the rising commodity prices. Impacts on EQ would be negligible.

40. Alternative C, construction of a barge lane, only partially fulfills the objectives of improving navigation conditions, reducing in-port operating costs, and providing for the safety of ships entering and leaving the harbor. The net impacts of Alternative C on NED would be adverse due to the costs of the alternative far exceeding the potential benefits. The significant local costs would adversely affect RD and SWB due to the marginal benefits obtained. Impacts on EQ would be adverse due to the construction and dredging and disposal of material involved.

41. Alternative D, widening the navigation channel, meets most of the planning objectives through improving navigation, reducing in-port operating costs, providing for the safety of ships, and enhancing the growth and development of the port and tributary areas. The objective of enhancing the environment is not fulfilled by the dredging of the channel; however, the environment may be enhanced through the proper selection of methods of construction and disposal areas. The net impact on NED would be beneficial due to the reduction in operating costs and vessel transit time. The impacts associated with RD and SWB would also be beneficial due to the enhancement of the growth and development potentials of industry in the area. Impacts on EQ would be mainly adverse, resulting from the construction and dredging and disposal of material. However, beneficial impacts on EQ could be obtained through the use of certain disposal areas or methods of construction.

42. Based on the above analysis of the impacts of each alternative on NED, EQ, RD, and SWB, Alternative D was found to have the most beneficial impacts on NED, RD, and SWB. Alternative D also fulfills more of the planning objectives than the other alternatives. For these reasons, Alternative D was selected for further analysis to establish a plan that represents the best solution to the problems and needs of the area.

DEVELOPMENT OF DETAILED PLANS

43. In the preceding paragraphs, four alternative plans for addressing the problems and needs of the study area were analyzed. Of these, Alternative D was selected as the plan that would best address those problems and needs. In keeping with the guidelines established in P & S, Alternative D was analyzed and modified to develop one plan that would maximize the contributions to NED and another plan that would maximize the contributions to EQ. These two plans were then analyzed to determine the impacts associated with each plan to provide a basis for selecting the most appropriate course of action.

FORMULATION CRITERIA FOR DEVELOPMENT OF NED AND EQ PLANS

44. In developing a NED and EQ plan, consideration was given to the national objectives of:

a. Increasing the value of the Nation's output of goods and services and improving national economic efficiency (NED).

b. Enhancing the quality of the environment by the management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems (EQ).

45. Therefore, the NED plan developed from Alternative D should maximize

the increase in the Nation's output and efficiency while the EQ plan should maximize the enhancement (or minimize the degradation) of the environment. Considering the scope of the study authorization, the design criteria set forth in Section E, the desires of the local interests, and the width of the channel in the lower harbor, the width of the channel widening was determined to be 100 feet. This would provide a 500-foot-wide channel throughout most of the harbor. Any reduction in this widening would adversely impact vessel speeds and result in a channel that could not adequately and safely handle the vessels that call at the port without excessive increase in operating time and expense. A wider channel would result in only a limited increase in benefits due to the restrictions imposed by the lower harbor channel and the Talmadge Bridge, while the cost of the widening would increase substantially. Additional widening would also involve a substantial removal of additional land from Hutchinson Island thus adversely affecting future as well as existing development. Therefore, widening the channel to 500 feet was considered the most feasible plan for channel widening.

46. By utilizing the 500-foot width as a base condition and choosing different methods of construction and disposal, a NED plan can be developed that maximizes the Nation's output and efficiency. Also, an EQ plan can be developed that maximizes the enhancement of the environment. Since the direct benefits of the widening are fixed by the design width, the cost of construction must be kept at a minimum in order to maximize NED. Also, since the direct impacts on the environment result from the actual construction and the disposal of the dredged material, the method of construction and disposal should be designed to minimize the adverse impacts on EQ and enhance the environment where possible.

POSSIBLE METHODS OF CONSTRUCTION

47. The various methods of construction center mainly on the different

techniques of dredging material from the river. These techniques include the use of a pipeline, hopper, and bucket dredge or the use of a dragline operating from the riverbank or from a barge. The use of a hopper dredge is not considered feasible for widening the river due to the limited operating width (100 feet) and the existing channel side slope. There is also a restriction on where the other methods may be employed. In the reach between the Engineer yard and the Talmadge Bridge either a bucket dredge or a dragline would be required to remove the material due to the presence of old piling and discarded construction materials. The remaining channel widening can be accomplish using any of the methods.

48. Another variable method in construction is that related to timing. As noted in Section B, the Savannah River is host to two species of fish that make spawning runs up the Savannah River in the spring. While some studies indicate that dredging does not affect these runs, local and state officials have expressed concern over the possible adverse effects of the dredging on these fish. Therefore, another method of construction that should be considered consists of timed dredging where dredging would be halted during the spawning runs.

POSSIBLE METHODS OF DISPOSAL

49. The different methods of material disposal depend to a large extent on the method of dredging. Pipeline dredging involves either overboard disposal outside of the dredging area or pumping the material to a diked area where it can be contained. Bucket dredging involves placing the material on a barge to be carried to either an open water disposal site or some point of discharge or transfer. Dragline dredging involves placing the material on either a truck or barge in order to haul it to either a land fill site or an open water disposal site.

50. The use of overboard disposal within Savannah Harbor is not practical due

to the confined waterways involved. Pumping the material to a diked area is feasible where adequate dikes and drainage can be provided. Open water disposal is also feasible provided the material is placed so that it would not wash back into the navigation channel. Land fill operations are generally desired in the Savannah area in order to provide additional high ground for industrial development.

POSSIBLE DISPOSAL AREAS

51. Based on the methods of construction and disposal presented above, possible sites were analyzed to determine their feasibility for use as disposal areas. The areas shown on Plates D-1, D-2, D-3, and D-4 represent the various areas considered for material disposal that are available for use (as determined by local interests). Except for the ocean disposal site, the areas are not currently being used for disposal and they are not scheduled for use as maintenance disposal areas.

52. The ocean disposal area is located just south of the seaward end of the bar channel (bar channel mile 10.8) at latitude 31°57' N. and longitude 80°46' W. This site is an approved, existing site that is periodically used for material disposal.

53. Another possible disposal site is located on Tybee Island at Savannah Beach. A beach restoration project has been conducted on this beach and periodic nourishment is required. Analysis of hydrographic surveys of the waters surrrounding Savannah Beach indicates that the waters are too shallow for material placement by barge to be practical. Therefore, the material would have to be either pumped ashore by a pump-out barge or brought in by truck.

54. Area A (30 acres) and Area B (40 acres) are located on a small canal on the southern bank of the river between Flinkote Company and the East Coast Terminal (approximately one-half mile east of the Fig Island Turning basin).

The area adjacent to the canal is marshland surrounded by small trees and various herbaceous plants. Since this area does contain some productive marshland and since other disposal areas are available, Areas A and B were eliminated from further consideration.

55. Area C (140 acres) lies approximately one-half mile south of Fig Island turning basin. It is bordered by President Street on the north, Savannah Golf Club on the east, Hillcrest Cemetery, a school, and a residential area on the south, and railroad tracks on the west. There are several major sewer lines that cross the area to reach a treatment plant north of President Street. However, none of these lines would have to be relocated. The area is vegetated with an early succession forest interspersed with open areas of herbaceous plants. The drainage ditches that cross the area have a variety of aquatic species in them.

56. Area D (45 acres) consists of two abandoned slips and the area surrounding them. These are located on Hutchinson Island on the north bank of the river just east of Georgia Kaolin. These slips are filled with silt up to just above the low water line. The area surrounding the slips is covered by mixed shrubs, herbs, and small trees. Utilization of the slips for disposal would require bulkheading in order to prevent the silt from being pushed back into the river.

57. Area E (122 acres) is located on Hutchinson Island approximately three-quarters of a mile north of Georgia Kaolin adjacent to the Back River and the tide gate road. This area has been used for disposal in the past and is currently under cultivation. This land belongs to SCL railroad but is leased to private farmers for agriculture.

58. Area F(a) (38 acres) and F(b) (42 acres) are located under and adjacent to the Talmadge Bridge on Hutchinson Island. The areas are bounded by the river on the south, by an old dike on the west, by railroads to the north,

and industrial property to the east. Area F(b) is crossed by several roads and railroads. Therefore, material would have to be hauled into this area by truck in order for the area to be used. These areas were used about 15 years ago as a disposal site and have since revegetated. They are currently covered in shrubs, herbs, vines, and small trees.

59. Area G (89 acres) is located on Hutchinson Island approximately one mile west of the Talmadge Bridge. It is bounded on the south by the river, on the west and north by the SCL railroad, and on the east by other undeveloped property. The area was recently used as a disposal site and it is presently covered with herbs and some small shrubs.

60. Areas H (68 acres) and I (65 acres) are upland areas located along the Dundee Canal which empties into the Savannah River on the southern bank across from the Marsh Island turning basin. This area is bounded by the National Gypsum Company on the west, industrial development on the east, and State Route 21 on the south. The area is crossed by several railroads and consists mainly of a mixed oak-pine forest.

DEVELOPMENT OF NED PLAN

61. As previously stated, the NED plan should maximize the increase in the Nation's output and efficiency. Since the direct benefits of the widening are determined by the channel width, the cost of construction must be kept at a minimum in order to maximize NED. To determine the least cost method of construction and disposal, the disposal areas were evaluated to determine the costs involved in utilizing each area. Table D-1 contains a list of the possible disposal areas showing their capacity and the various costs involved in utilizing each area. It should be noted that the average unit cost shown is based on utilizing the area to its capacity by the method indicated.

62. To effectively determine the costs associated with using each particular site, it is necessary to analyze the dredging and disposal requirements.

TABLE D-1

SUMMARY OF DISPOSAL AREA COSTS

Area	Capacity (cy)	Preparation Costs 1/ ($)	Dredging & Disposal Cost ($/cy)	Average Unit Cost ($/cy)
Ocean Site	-	-	3.75	3.75
Beach Site	-	-	4.25	4.25
C	1,125,000	225,000 2/	1.50 4/	1.70
			2.50 5/	2.70
		168,000 3/	2.50 6/	2.65
D	581,000	718,000	1.00	2.24
E	985,000	211,000	1.00 4/	1.21
			1.50 5/	1.71
F (a)	485,000	102,000 2/	1.00	1.21
(b)	515,000	50,000 3/	1.40 7/	1.50
G	861,000	195,000	1.00	1.23
H	548,000	184,000	1.00	1.34
I	518,000	208,000	1.00	1.40

1/ Prepartion Costs - includes easements, dikes, wasteweirs, relocations, bulkheads, and necessary site prep.

2/ Pumped in

3/ Hauled in

4/ Pumped from lower end

5/ Pumped from upper end

6/ Hauled in

7/ Dredged with dragline at $1.25/cy plus 1 mile haul at $0.15/cy/mile.

Note: Add $0.50 /cy for dredging of material in reach 2 for land disposal due to presence of numerous piling and heavy debris.

The dredging requirements for the widening were broken down into reaches based on location or special techniques required. Reach 1 lies between Fig Island turning basin and the Engineer Yard and contains approximately 344,000 cubic yards of material that would have to be dredged. Reach 2 lies between the Engineer Yard and the slip at Georgia Kaolin. This area contains approximately 476,000 cubic yards of material that would have to be dredged with either a bucket dredge or a dragline due to the presence of old piling and debris. Reach 3 lies between the slip at Georgia Kaolin and the Talmadge Bridge. This area contains approximately 512,000 cubic yards of material that would also have to be dredged using either a bucket dredge or a dragline due to the debris. Reach 4 lies between the Talmadge Bridge and the SCL railroad bridge site. This area contains approximately 472,000 cubic yards of material that would require dredging. Reach 5 lies between the SCL railroad bridge site and Kings Island turning basin. It contains 1,147,000 cubic yards of material that could be dredged with a pipeline dredge.

63. Based on the area capacities and the comparative costs shown in Table D-1 and the dredging requirements discussed above, the following plan was developed that would minimize the cost of the construction. Reach 1 would be dredged with a pipeline dredge and pumped to a part of Area E. Reach 2 would be dredged with a dragline and the material would be hauled to area F (a) where it would be used as landfill. Reach 3 would also be dredged with a dragline. The material would be hauled to area F (b) where it would also be used as landfill. Reach 4 would be pumped into area E. Reach 5 would be dredged with a pipeline dredge and the material would be pumped into areas G and H.

64. This dredging and disposal plan constitute the NED plan for widening the harbor. It represents those variables that maximize the contributions to the NED account. The total estimated cost of this plan, based on the items mentioned above, is shown in Table D-2.

TABLE D-2
SUMMARY OF ESTIMATED COST
NED PLAN

Feature		Costs
Dredging		
Reach 1, 4, 5		
1,963,000 - c.y. @ $1/cy		$1,963,000
Reach 2		
476,000 c.y. @ $2.05/cy		976,000
Reach 3 - 512,000 c.y. @ $1.40/cy		717,000
Subtotal		3,656,000
Contingencies (15%)		548,000
Subtotal		4,204,000
Engineering and Design (8%)		336,000
Supervision and Administration (6%)		252,000
Total Dredging Cost		$4,792,000
Navigation Aids		20,000
Relocations		123,000
Clearing and removal of improvements		151,000
Lands and damages		2,894,000
Disposal areas		
Easements	$369,000	
Dikes and wasteweirs	$198,000	
Total Disposal areas		567,000
Total estimated first cost of NED Plan		$8,550,000

DEVELOPMENT OF EQ PLAN

65. As previously stated, the EQ plan should maximize the enhancement of the environment. Due to the nature of dredging, however, certain adverse impacts associated with dredging are unavoidable. Therefore, once the decision is made to widen the channel, certain adverse effects on the environment will occur as a result of this widening regardless of other measures employed. Therefore, by taking the 100-foot widening as the base condition and analyzing the methods of construction and disposal and the possible disposal areas, a plan can be developed that makes positive contributions to EQ or mitigates the inherent adverse effects of the widening.

66. As previously noted under methods of construction, a variable in the construction of the widening project is associated with the timing of dredging. Due to the spawning migrations of the shad and striped bass in the spring, F&WS and EPA have suggested that no dredging work be performed in the channel during the months of February through May. Therefore, to avoid any possible adverse effects on these two species of fish, the EQ plan will contain provisions for halting dredging activities during the months of February through May. The additional costs associated with this action are included in the additional mobilization and demobilization costs shown in the summary of estimated costs for the EQ plan.

67. The various methods of dredging, such as bucket, dragline, or pipeline, are dependent on the type of material to be dredged and the method of disposal. Since the material dredging requirements were already noted, the only remaining variable is the method of disposal. The impacts generated by the disposal of the dredged material can be controlled through the careful selection of disposal methods and sites. The disposal sites considered and the significant beneficial and adverse impacts associated with using each site are shown on Table D-3.

TABLE D-3

SUMMARY COMPARISON OF DISPOSAL SITES

	Significant Environmental Impacts	
Site	Beneficial	Adverse
Ocean	Creation of artificial fishing reefs	Temporary increase water turbidity Destruction of benthics
Beach	Nourishment of recreation beach	Temporary increase water turbidity
	Additional storm protection	Destruction of benthics
Area A&B	-	Destruction of marshland and surrounding shrubs & trees
Area C	Reduction of mosquito problem	Destruction of existing vegetation, shrubs, trees, aquatic plants, and wildlife habitat
	Reduction of potential encephalitis problem	
Area D	-	Destruction of existing vegetation wildlife habitat, & tidal flats
Area E	-	Removal of 122 acres of productive farmland for about 5 years
Area F	-	Destruction of existing vegetation and wildlife habitat
Area G	-	Destruction of very limited vegetation & wildlife habitat
Area H & I	-	Destruction of oak-pine forest and very good wildlife habitat

68. Analyzing Table D-3 provides a basis for selecting or rejecting those disposal sites listed based on the beneficial or adverse environmental impacts associated with using that particular site. By selecting the ocean disposal site, the beach nourishment site, and the disposal area C site beneficial impacts can be obtained. The use of the ocean disposal site provides beneficial impacts through the potential creation of fish habitat by proper placement of the debris that is to be removed from the harbor. The use of the beach nourishment site provides beneficial impacts on the environment through the nourishment of a recreational beach and the provision of additional storm protection for Tybee Island. The use of Area C provides beneficial impacts through the reduction of a mosquito control problem in an urban area and the elimination of a potential source of encephalitis.

69. Based on the use of these three disposal sites, costs were developed for the EQ plan. The estimated first costs are shown on Table D-4. The dredging costs were based on (1) dredging reach 2 and 3 with a bucket dredge so the material could be loaded on barges and hauled to the ocean disposal site, (2) dredging reach 1,4, and part of 5 with a pipeline dredge and pumping it to Area C, and (3) dredging the rest of reach 5 with a bucket dredge and hauling the material to Tybee Island where it would be used in the beach nourishment program. This plan consisting of the above dredging and disposal plan combined with the timed dredging activities represents the plan that has the most beneficial impacts on the environment. It is therefore designated as the EQ plan and analyzed as such.

TABLE D-4
SUMMARY OF ESTIMATED COST
EQ PLAN

Feature		Cost
Dredging		
Reach 2,3, ocean disposal		
988,000 cy @ $3.75/cy		$3,705,000
Reach 1 Area C		
344,000 cy @ $1.50/cy		516,000
Reach 4,5 Area C		
781,000 cy @ $2.50/cy		$1,953,000
Reach 5 Beach nourishment		
838,000 @ $4.25/cy		3,562,000
Subtotal Dredging		$9,736,000
Additional Mobilization & Demobilization		100,000
Subtotal		$9,836,000
Contingencies (15%)		1,475,000
Subtotal		$11,311,000
Engineering and Design (8%)		905,000
Supervision and Administration (6%)		679,000
Total Dredging Cost		$12,895,000
Navigation Aids		20,000
Relocations		123,000
Clearing and Removal of Improvements		151,000
Lands and Damages		2,894,000
Disposal Areas		
Easements	$168,000	
Dikes and wasteweirs	57,000	
Total Disposal Areas		225,000
Total EQ Plan		$16,308,000

IMPACT ASSESSMENT

70. The NED and EQ plans developed in the preceding pages provide two equally detailed and implementable alternatives for widening Savannah Harbor in order to meet the navigation needs of the study area. The NED plan provides for widening the harbor in a way that maximizes the increase in the Nation's output and efficiency. The EQ plan provides for widening the harbor in a way that maximizes the enhancement of the environment.

71. In order to determine the most appropriate course of action, it is necessary to analyze each of these plans to determine the significant impacts each plan would have on the study area. Impact assessment is an objective analysis conducted to identify and measure the likely economic, environmental, and social effects of each alternative plan. The effects listed below result from the implementation of a particular plan and reflect the changes in the study area in relation to the base year conditions. These effects form the basis for evaluating the beneficial and adverse contributions of each plan.

NED PLAN

72. The NED plan, as developed earlier, provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island turning basin to the Kings Island turning basin. This widening would be accomplished using a pipeline dredge and a dragline and placing the dredged material in disposal areas E, F, G, and H.

73. The significant impacts of the NED plan are listed below. Table D-6 (discussed later in this section) provides a summary of these impacts and the net effect each has on a particular aspect of the economy, environment, and social well-being of the study area.

74. Economic effects. The main economic effects of the NED plan are related to the costs associated with construction and the benefits associated with reduced shipping costs. Since the NED plan was developed to produce the maximum excess of benefits over costs, it provides the greatest return for each dollar spent. This is evidenced by a benefit-to-cost (B/C) ratio of approximately 1/73 to 1.

75. National Economic Development would be adversely affected by the cost of construction and relocation. However, as indicated by the B/C ratio above, the beneficial effects resulting from transportation savings generated by reduced vessel operating costs would significantly outweigh the construction costs involved. Local government finance would be similarly affected. Although the local share of the project cost would adversely affect the local government, the savings resulting from the plan would benefit everyone.

76. Tax revenues would be adversely affected by the loss of 27 acres of industrial land on Hutchinson Island. This would be offset, somewhat, by increased property values of disposal areas. Other property values in the study area would not be significantly affected, although some minor beneficial impacts could be expected due to the improved harbor facilities.

77. Land use in the study area should not be appreciably affected. In the harbor area, the 27 acres of shoreline on Hutchinson Island to be taken by the widening would be removed from the private sector. Other land use patterns are already developed and would not be significantly altered by this plan.

78. Public facilities in the study area outside the harbor would not be significantly affected. The harbor facilities, which are public, would be significantly improved. Other facilities in the harbor might require relocation; however, the overall effect would be negligible. Public services would also not be significantly affected by this plan.

79. Local and regional growth would not be significantly affected. Some minor beneficial effects related to enhanced growth could accrue; however, the widening would not directly stimulate growth. The relocations involved in implementation of this plan involve only one entire facility relocation, a radio tower, which can readily be accommodated elsewhere in the area. Other relocations involve only parts of facilities which must be moved.

80. Real income distribution, employment, and business and industrial activity would not be significantly affected by this plan. There would be some minor beneficial effects associated with the reduced shipping costs enhancing industrial activity. However, these effects could easily be overshadowed by other economic conditions.

81. Agricultural activity in the area would not be significantly affected by the plan. The use of disposal area E would temporarily remove 122 acres of land from farm production. However, the land should be suitable for farming again within 5 years.

82. The effects of the plan on national defense would be minor. The improved harbor facilities would, in times of national emergency, be beneficial in aiding the movement of supplies and equipment.

83. Environmental effects. The main environmental effects of the NED plan would result from the dredging and disposal of material. The actual dredging activity and the subsequent disposal of the material have significant impacts on the environment of the study area. The impacts that would result from implementation of this plan and the use of disposal areas E, F, G, and H are described below.

84. The manmade resources on Hutchinson Island that would require relocation would be adversely affected. The existing buildings, docking

facilities, and associated structures that fall within the new harbor line would have to be moved. Although the dredging activity would have temporary adverse effects on the navigation facilities in the harbor by increasing congestion, widening the channel would significantly improve the harbor facilities. Also, increasing the elevation of the disposal areas would enhance their potential for use as industrial sites.

85. The natural resources of the study area would not be significantly affected by the plan. The resources located on the strip of land to be dredged by the widening would be lost. However, there are no known major resources in that area. Other natural resources that might be affected would be located at the disposal sites. Since Areas F, F, and G have been previously used for disposal, the effects on these areas should be minor. Area H has not been previously used and it supports a mixed oak-pine forest that would have to be removed.

86. The NED plan would not have any significant adverse effects on air pollution in the study area. There would be some pollution generated by the construction activity, but this would be temporary. There also might be an increase in air pollution associated with increased industrial activity. This would be controlled by State and Federal regulations. Another possible source of air pollution is that resulting from the decay of organics that may be present in the dredged material. These effects should be temporary.

87. Adverse impacts on water pollution would be generated by the dredging and disposal activities. The dredging activity would increase water turbidity through the suspension of solids in the water column. Also, the heavy metals and organic materials trapped in the bottom sediments would be released into the water column. At the disposal sites, dikes and waste weirs would be used to control the release of waters from hydraulic, or pipeline, dredging. In all, the impacts on water pollution would be

significant in the area of dredging and disposal; however, the impacts would be confined and generally temporary.

88. The impacts on land pollution would be mainly negligible. As previously stated, 27 acres of land on Hutchinson Island would be lost due to the widening. Disposal area F would be adversely affected by the placement of piling and debris on this area; however, this material would be covered with sand. The other areas would be raised in elevation but not otherwise affected as the remaining material is generally good, clean sand.

89. The animals and birds living in the harbor area would be adversely affected by the construction activities. The wildlife habitat found on the 27 acres of land to be removed as part of the widening would be lost. The habitat found on the disposal areas would also be destroyed. Those larger animals and birds that could escape the construction would do so and move into surrounding areas. The other animals that could not escape would be destroyed. The animals and birds would return with the natural revegetation of the area.

90. Marine life would be adversely affected by the dredging activities. The larger, free-swimming species would move out of the area. The less mobile species would be destroyed; however, this destruction should be confined to the immediate construction area. The bottom biota would also be destroyed in the immediate vicinity of the dredging. Migrating fish, striped bass and shad, would move to avoid the construction and should not be affected.

91. Existing plantlife in the construction and disposal areas would be destroyed. Area E consists of farmland that is cultivated and provides only limited wildlife habitat. This area has been used previously for disposal of material. Area F contains early succession forest growth which has developed since previous disposal usage. This area provides

good wildlife habitat. Area G contains very early succession plant growth due to recent use as a disposal site. This area provides only limited habitat. Area H contains a mature oak-pine forest which provides excellent wildlife habitat. The vegetation on these areas would be destroyed. In time, barring development, the areas would revegetate themselves, again providing wildlife habitat.

92. As stated above, the habitats of the various areas would be destroyed along with the existing ecosystems and food chains. These systems and food chains would reestablish themselves as the areas revegetated. The long-term effects should be minor with productivity, diversity, and stability gradually returning to their preproject levels.

93. The impacts of the NED plan on the physical and hydrologic aspects of the area should be mainly negligible. Erosion along the channel should be reduced slightly due to the lower velocities. Sedimentation along the widened channel should increase slightly; however, the overall effect on the harbor sedimentation rate should be negligible. The 3 horizontal to 1 vertical design channel side slopes should prevent bank slumping and aid in bank stability. The groundwater of the area should not be affected and the tidal flows should not be appreciably affected. No other significant effects are anticipated.

94. Social effects. The significant social effects of the NED plan would result from the beneficial impacts of the plan on the economy of the area or from the construction activity. The noise associated with the construction activity would generate a temporary adverse effect on the harbor area. This effect would cease following completion of construction.

95. The population of the area would not be significantly affected by the plan. The mobility and density would not be affected and there would be no displacement of people involved. There would be minor beneficial

effects associated with the improved economic conditions that would affect the general population through reduced prices and inflationary pressures associated with shipping costs. Housing of the area should not be significantly affected since no relocation of homes are involved.

96. The esthetic values of the area would suffer temporary adverse effects associated with the construction activity and the disposal of material. These should generally be short-term effects with the area returning to preproject conditions following cessation of construction and revegetation of disposal areas. The effects on archeological sites are anticipated to be negligible. A study is under contract and will be supplied as an addendum to this study. There are no effects anticipated on historical sites in the study area.

97. Transportation in the study area would only be affected by the improved navigation facilities of the harbor. Other facilities would not be affected by the plan. Educational, recreational, and cultural opportunities would benefit from the improved economic conditions of the study area; however, these benefits would be minor.

98. Community cohesion would not be significantly affected by the plan. There would be some minor beneficial impacts associated with working together to accomplish the project and with the improved economic conditions of the area. Community growth would also be beneficially affected by the improved economic conditions, although these effects would be generally minor. Institutional relationships would not be significantly affected by the NED plan.

99. The general health conditions of the area should not be significantly affected. Some beneficial impacts might accrue due to the improved economic conditions. However, these impacts would be minor.

EQ PLAN

100. The EQ plan, as developed earlier, provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island turning basin to the Kings Island turning basin. This widening would be accomplished by using a pipeline dredge and a bucket dredge and placing the material in the ocean disposal site, at the beach nourishment site, and in Area C.

101. The significant impacts of the EQ plan are listed below. Table D-6 (discussed later in this section) provides a summary of these impacts and the net effect each has on a particular aspect of the economy, environment, and social well-being of the study area.

102. Economic effects. The main economic effects of the EQ plan are related to the costs associated with construction and the benefits associated with reduced shipping costs. Since the EQ plan was developed to maximize the enhancement of the environment, more emphasis was placed on the attainment of intangible values rather than economic optimization. Therefore, this plan represents a more costly plan than does the NED plan as illustrated by the B/C ratio of 0.91 to 1.

103. National Economic Development would be adversely affected by the cost of construction and relocation. Since the B/C ratio is below unity, the benefits generated by this plan do not exceed the costs and thereby result in a net adverse impact on National Economic Development. Local government finance would be similarly affected with the resulting costs exceeding the project benefits.

104. Tax revenues would be adversely affected by the loss of 27 acres of industrial land on Hutchinson Island. This would be offset, somewhat, by the increased value of disposal area C. Other property values in the study area would not be significantly affected, although some minor beneficial impacts could be expected due to the improved harbor facilities.

105. Land use in the study area should not be appreciably affected. In the harbor area, the 27 acres of shoreline on Hutchinson Island to be taken by the widening would be removed by the private sector. Other land use patterns are already developed and would not be significantly altered by this plan.

106. Public facilities in the harbor area that would require relocation would be adversely affected. The harbor facilities, which are public, would be significantly improved. Other facilities would not be significantly affected. The sewerlines crossing Area C should not have to be relocated. Public services would not be significantly affected.

107. Local and regional growth would not be significantly affected. Some minor beneficial effects related to enhanced growth could accrue; however, the widening would not directly stimulate growth. The relocations involved in implementation of this plan involve only one entire facility relocation, a radio tower, which can readily be accommodated elsewhere in the area. Other relocations involve only parts of facilities which must be moved.

108. Real income distribution, employment, and business and industrial activity would not be significantly affected by this plan. There would be some minor beneficial effects associated with the reduced shipping costs enhancing industrial activity. However, these effects could easily be overshadowed by other economic conditions.

109. Agricultural activity in the area would not be significantly affected by the EQ plan. There are no farmlands involved in this plan. The effects of the plan on national defense would be minor. The improved harbor facilities would, in times of national emergency, be beneficial in aiding the movement of supplies and equipment.

110. Environmental effects. The main environmental effects of the EQ plan would result from the dredging and disposal of material. The actual dredging activity and the subsequent disposal of the material would have significant impacts on the environment of the study area. The impacts that would result from the implementation of this plan and the use of the ocean disposal site, the beach nourishment site, and Area C are described below.

111. The manmade resources on Hutchinson Island that would require relocation would be adversely affected. The existing buildings, docking facilities, and associated structures that fall within the new harbor line would have to be moved. Although the dredging activity would temporarily have adverse effects on the navigation facilities in the harbor by increasing congestion, widening the channel would significantly improve the harbor facilities. Also, increasing the elevation of disposal area C would enhance its potential for future use.

112. The natural resources in the harbor area would not be significantly affected by the plan. The resources located on the strip of land to be dredged by the widening would be lost. However, there are no known major resources in that area. Those resources located in disposal area C would be lost. This is a lowland area; however, it suffers from mosquito infestation and municipal pollution. A major natural resource of the study area that would be significantly benefited is Savannah Beach. The disposal of the material there would help protect the island from storms and provide additional recreational beach.

113. The EQ plan would not have any significant adverse effects on air pollution in the study area. There would be some pollution generated by the construction activity, but this would be temporary. There also might be an increase in air pollution associated with increased industrial activity. This would be controlled by State and Federal regulations. Another possible source of air pollution is that resulting from the decay

of organics that may be present in the dredged material. These effects should be temporary.

114. Adverse impacts on water pollution would be generated by the dredging and disposal activities. The dredging activity would increase water turbidity through the suspension of solids in the water column. Also, the heavy metals and organic materials trapped in the bottom sediments would be released into the water column. These problems would also be encountered at the ocean disposal site and at the beach nourishment site. At disposal area C, dikes and waste weirs would be used to control the release of waters from hydraulic, or pipeline, dredging. In all, the impacts on water pollution would be significant in the area of dredging and disposal; however, the impacts would be confined and generally temporary.

115. The impacts on land pollution would be mainly negligible. The 27 acres of land on Hutchinson Island that would be lost to the widening would be adversely affected. Disposal area C would be raised in elevation providing better drainage, but it would not otherwise be affected.

116. The animals and birds living in the harbor area would be adversely affected by the construction activities. The wildlife habitat found on the 27 acres of land to be removed as part of the widening would be lost. The habitat found on disposal area C would be destroyed. Those larger animals and birds that could escape the construction would move into surrounding areas. The other animals that could not escape would be destroyed. Those animals and birds that did escape would return with the natural revegetation.

117. Marine life would be adversely affected by the dredging and disposal activities. The larger, free-swimming species would move out of the area. The less mobile species would be destroyed. However, this destruction should be confined to the immediate construction area. The bottom biota

would also be destroyed in the immediate vicinity of the dredging, ocean disposal, and beach nourishment. Migrating fish, striped bass and shad, would not be affected by this plan since construction would be halted during the major migration period from February to May. There would also be some beneficial impacts on ocean fisheries due to the creation of fish habitat using the debris that would be disposed of at the ocean site.

118. Existing plantlife in the construction area and in Area C would be destroyed. Area C is fairly low land with good lowland wildlife habitat on it. This habitat would be destroyed and changed to upland habitat as the filled area revegetates. The existing ecosystems and food chains of Area C would be destroyed. These systems would also reestablish themselves as the area revegetates. The long-term effects on productivity, diversity, and stability should be minor.

119. The impacts of the EQ plan on the physical and hydrologic aspects of the area should be mainly negligible. Erosion along the channel should be reduced slightly due to the lower velocities. Sedimentation along the widened channel should increase slightly; however, the overall sedimentation in the harbor should not be significantly affected. The design channel side slopes should prevent bank slumping and aid in bank stability. The groundwater of the area should not be affected and there should be no appreciable change in tidal flows.

120. Social effects. The significant social effects of the EQ plan would result from the beneficial impacts of the plan on the shipping industry of the area or from the construction activity and disposal of material. The noise associated with the construction activity would generate a temporary adverse effect on the harbor area. This effect would cease following completion of construction. The construction and disposal activities would also generate temporary adverse esthetic impacts. These would also diminish with time following completion of construction and disposal.

121. The population of the area would not be significantly affected by the plan. The mobility and density would not be affected and there would be no displacement of people involved. There would also be no significant effect on housing in the area. Transportation in the study area would only be affected by the improved navigation facilities of the harbor. Other facilities would not be affected by the plan.

122. Educational, recreational, and cultural opportunities would benefit from the improved economic conditions of the study area. These benefits would generally be minor. Recreational opportunities would be significantly benefited by the nourishment of Savannah Beach. Community cohesion, community growth, and institutional relationships would be beneficially affected by the improved economic conditions and the cooperation required to accomplish the project. These benefits would be generally minor.

123. Archeological and historical sites should not be affected by this plan. As previously stated, a study is under contract and the results will be supplied as an addendum to this report. The health conditions of the area could be significantly affected by the plan through the reduction of the mosquito problem and potential source of encephalitis at Area C. The disposal of material in Area C would eliminate a major breeding ground for mosquitos, one that suffers from municipal pollution.

EVALUATION

124. Evaluation involves determining the contributions, both beneficial and adverse, each alternative plan would make towards fulfilling the planning objectives of the study. Evaluation also involves an appraisal of the contributions each plan makes to the system of accounts of P & S, notably NED, EQ, RD, and SWB. The third activity of evaluation involves applying specified criteria to the alternative plans to test their responsiveness. Finally, evaluation involves making a "trade-off" analysis

of each alternative to determine the comparative contributions of each alternative plan. These activities then provide a basis for selecting the most appropriate course of action.

PLANNING OBJECTIVE FULFILLMENT

125. The first activity of evaluation involves determining each alternative plan's fulfillment of the planning objectives. Each alternative plan must be analyzed to determine the degree of objective fulfillment in order to compare the accomplishments of the alternative plans.

126. The NED plan improves navigation conditions in the harbor between Fig Island turning basin and Kings Island turning basin by reducing the constraints imposed by the narrow 400-foot channel. Widening the inner harbor makes that part of the harbor which is most heavily used at least 500 feet wide. This allows for increased vessel speeds, easier docking and undocking, and more room to maneuver for the ships that call at Savannah.

127. By allowing increased vessel speeds, reducing the docking and undocking problems, and increasing the maneuver area for the ships, vessel transit time can be reduced. By reducing the vessel transit time, the in-port operating costs can be reduced. Therefore, the objective of reducing in-port operating costs and transit time would be fulfilled.

128. By reducing the docking and undocking problems and increasing the maneuver area, the safety of vessels entering and leaving the harbor is enhanced. This enhancement of safety in the harbor fulfills the objective of providing for the safety of vessels in the harbor.

129. The reduced operating costs would be reflected in transportation savings that would accrue to those companies that ship commodities through the harbor. These transportation savings would encourage shippers

to ship more through Savannah Harbor. This would enhance the growth and development of the port. The reduced shipping costs would also be reflected on consumer markets. Lower prices and reduced inflationary pressures would enhance the growth and development of the study area, fulfilling that objective.

130. The NED plan does not provide any significant beneficial impacts on the natural environment either locally or nationally. Since economic conditions of the area would be improved, the human environment would be enhanced. Therefore, the objective of enhancing the environment is only partially fulfilled since there are no beneficial contributions to the natural environment.

131. The EQ plan would fulfill the objectives of improving navigation conditions, reducing in-port operating costs and providing for the safety of ships that enter and leave the port similar to the NED plan. The EQ plan would also enhance the growth and development of the port and tributary area. However, the increased cost associated with the EQ plan would result in a substantial decrease in the the net benefits. This would decrease the favorable impacts of the plan on the local and national economy.

132. The EQ plan would also fulfill the objective of enhancing the quality of the environment, both human and natural. The human environment would be enhanced through the reduction of the mosquito problem and potential encephalitis problem in Area C and through the provision of additional recreational beach and storm protection at Savannah Beach. The natural environment would be enhanced through the improvement of the beach and through the creation of artificial fish habitat at the ocean disposal site.

133. Therefore, the NED plan fulfills all of the planning objectives except enhancing the quality of the natural environment and the EQ plan fulfills all of the planning objectives including the enhancement of the environment.

SYSTEM OF ACCOUNTS CONTRIBUTIONS

134. The significant impacts of each plan must also be evaluated to establish the plan's contributions to the NED, EQ, RD, and SWB accounts of P & S. These impacts were identified in the impact assessment provided earlier. The significant effects on the four accounts are shown on table D-5 for each plan. This table provides information concerning the impact: its contribution, its location, the timing of the impact, the uncertainty associated with the impact, the exclusivity of the impact, and the actuality of the impact.

135. As shown in table D-5, the net effect of the NED plan on the NED account would be beneficial due to the favorable impacts of the project on navigation and the economy. The net effect of the NED plan on EQ would be adverse due to the adverse effects associated with the construction and disposal of material. The net effect on RD and SWB would be beneficial due to the favorable impacts of the plan on shipping, industry, and the economy of the harbor area.

136. The net effect of the EQ plan on the NED account would be adverse due to the costs of the project exceeding the benefits. The net effect of the EQ plan on EQ would be beneficial due to the improved human and natural environment associated with the reduction of the mosquito problem, the creation of an artificial fishing reef, and the provision of additional beach for recreation and storm protection at Savannah Beach. The net effect of the EQ plan would also be beneficial to the RD and SWB accounts due to the improved economy of the area, the increased recreational opportunity, and the reduction of a potential health problem.

137. Therefore, the NED plan has a beneficial impact on the NED, RD, and SWB accounts and an adverse impact on the EQ account. The EQ plan has a beneficial impact on the RD, SWB, and EQ accounts and an adverse impact on NED.

Also, the impacts of the EQ plan on the RD and SWB accounts would be less beneficial than the impacts on these accounts generated by the NED plan.

SPECIFIED EVALUATION CRITERIA

138. The third evaluation activity involves applying specified criteria to the alternative plans to test their responsiveness. These criteria are: acceptability, completeness, effectiveness, efficiency, certainty, geographic scope, NED benefit-cost ratio, reversibility, and stability. Each plan was evaluated using these criteria and a summary is shown on table D-6.

139. The NED plan is acceptable to the general public in the study area. It is also strongly supported by the local officials. The NED plan is complete within itself, assuming normal harbor growth would continue. The NED plan is the most efficient means for widening the harbor and improving navigation. The NED plan has certainty in that it would reduce existing vessel operating costs and transit times. The NED plan primarily affects the harbor area. However, the entire tributary area would be affected by the plan. The resulting NED benefit-cost ratio would be 1.73 to 1. This plan, once implemented, would be only partially reversible. Changes brought about by construction and disposal of dredged material would be hard to reverse. Also, once implemented, the plan would be fairly stable due to the relative insensitivity of the plan to changes in future projections.

140. The EQ plan is also acceptalbe to the general public in the study area. The EQ plan is complete within itself, assuming normal harbor growth. The EQ plan is an effective means for reducing in-port operating costs. It is also an effective means for enhancing the environment. The EQ plan is not the most efficient plan for widening the harbor. It is the least costly plan for widening the harbor and enhancing the environment as proposed. The EQ plan has certainty in that it would reduce existing and future vessel operating costs. The effects of the EQ plan are primarily in the general harbor area. However, the entire tributary area is affected by the plan. The NED benefit-cost ratio of the

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EQ plan is about 0.91 to 1. This plan, once implemented, would be only partially reversible. Certain changes related to the construction and disposal of dredged material would be irreversible. Also, once implemented, the plan would be fairly stable due to the relative insensitivity of the plan to changes in future projections.

TRADE-OFF ANALYSIS

141. In the preceding discussion, the NED and EQ plans have been developed and analyzed to determine the impacts associated with each plan and the contributions of each plan to the planning objectives and to the system of accounts. Tables D-5 and D-6 provide a summary of the analysis. In order to determine the most appropriate plan of action, it is necessary to compare the alternative plans considered and select those features of each plan that provide mainly beneficial impacts and contributions. The resulting plan that is thus derived will be designated Plan C for reference.

142. As developed earlier, both the NED and the EQ plan provide for widening the harbor by 100 feet on the northern side of the existing channel between the Fig Island turning basin and the Kings Island turning basin. Therefore, this will be the basic criteria for Plan C. The different features of the NED and EQ plan that must be compared are the timing of construction and the respective disposal areas.

143. Under the NED plan, the construction activity would be carried from start to finish with no emphasis placed on dredging during any particular period. The EQ plan provides for halting the dredging activities during the period from February to May. This would be done to eliminate any possible interference with the spawning migrations of the striped bass and shad. Previous studies and observations during dredging activities have noted that the dredging appears to have little effect on the migration

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of the fish. The confinement of the dredging activity and the width of the river generally provide ample room for the fish to avoid the area. However, concern has been expressed at the State and Federal level over the potential adverse impacts the dredging operations could have on the migration of the fish. Therefore, to eliminate the possibility of an adverse impact on these migrating fish, Plan C includes provisions for halting dredging during the period of February to May.

144. The disposal sites for the NED plan include disposal areas E, F, G, and H (see plate D-1). Area E has been used for disposal in the past and it is now used for farmland. While using Area E would not have any significant impact on the wildlife of the area, it would involve the removal of 122 acres of farmland from production for a period of approximately 5 years. Area F has been used for disposal in the past and has revegetated. The area is zoned for industrial development, but has not been developed. The area does provide substantial wildlife habitat but the wildlife residing there consists mainly of birds and small animals. Area G has been recently used for disposal and only has limited vegetation on it. It is also zoned for industrial development. Area H consists of a natural forest of mixed oak and pine. The area provides excellent wildlife habitat even though it is zoned for industrial development.

145. The disposal sites for the EQ plan include the ocean disposal site, the beach nourishment site, and disposal area C. The ocean disposal site is an existing site that is currently being used for disposal. Therefore, disposal in this open-water area would have minimal impacts associated with the destruction and disruption of marine life. The beach nourishment site at Savannah Beach is an existing beach nourishment project. The material deposited there would provide additional recreational beach and storm protection. Disposal area C consists of a lowland that is a serious source of mosquitoes in the Savannah area. The area is covered in vegetation and provides habitat for birds and small animals. The area also suffers from municipal pollution.

146. In comparing the disposal sites of each plan, consideration must be given to the impacts associated with using each site and the cost of using each site. The use of Area G would not result in the destruction of good wildlife habitat or change the existing use of the area. This area is readily accessible and can be used at minimal cost. The use of Area F would result in the destruction of some limited wildlife habitat. However, this area has been previously used and is readily accessible at minimal cost. The use of Area E would temporarily remove farmland from production. The use of Area H would destroy excellent wildlife habitat and a natural forest. The use of the ocean disposal site would result in a limited destruction of marine life at the site and the possible creation of an artificial fishing reef. The use of the beach nourishment site would result in the limited destruction of marine life and the provision of additional beach area for recreation and storm protection. The use of Area C would reduce a mosquito problem area and potential source of encephalitis. It would also destroy the wildlife habitat in that area.

147. Based on these impacts, the disposal sites were analyzed to determine those sites which would provide an optimum level of beneficial contributions while minimizing the costs. Since the disposal sites for the NED plan represent the least costly methods of disposal, and since the disposal sites for the EQ plan provide the most beneficial contributions, the sites for each plan must be compared with the necessary "trade-offs" being performed in order to select the sites for Plan C.

148. The ocean disposal site provides some beneficial contributions in terms of creating fish habitat. When compared to disposal area H, the ocean site has substantially less adverse impacts and more beneficial impacts than the forested area at site H. In choosing the ocean disposal site over Area H, the increased cost of ocean disposal could be justified in order to prevent the destruction of the forest and wildlife habitat at Area H. Similarly, the beneficial contributions associated with the

beach nourishment site and Area C justify their use instead of the use of Area H. Therefore, Area H was rejected for inclusion in Plan C.

149. When comparing the use of the ocean disposal site with the use of Area E, the increased cost and beneficial impacts of using the ocean site must be compared with the lower cost and adverse impacts of using Area E. The temporary loss of farmland at Area E does not, however, represent significant adverse impacts on the area as a whole. Therefore, the increased cost of using the ocean site cannot be justified in order to obtain the limited benefits associated with using that site. Since a "trade-off" could not be performed to include the ocean disposal site, it was rejected for inclusion in Plan C.

150. In comparing Area E to the beach nourishment site, the beneficial impacts of the beach nourishment justify a "trade-off" between Area E and the beach site. However, since the beach nourishment site is part of an existing project, the beneficial impacts associated with using this site can be obtained under the periodic nourishment program at a considerably less cost. Therefore, the beach disposal site was rejected for Plan C.

151. In comparing Area E to the disposal site at Area C, it should be noted that the beneficial impacts of using Area C can be obtained for only a small increase in cost over Area E. In order to obtain the beneficial impacts of mosquito control and the reduction of the potential for encephalitis, a "trade-off" can be justified between Areas E and C. Based on this "trade-off," Area E can be eliminated from consideration for Plan C.

152. As a result of the above comparisons, disposal areas H and E, the ocean disposal site, and the beach nourishment site were excluded from Plan C. Since the remaining sites, Areas C, F, and G, are needed to adequately handle the disposal of the material, no further "trade-off"

analysis was performed between them. Also, since Areas F and G have fewer adverse impacts and cost less, the areas would be chosen over Area E. Areas F and G would also be selected over the ocean disposal site and the beach nourishment site for the reasons given above for Area E. Therefore, Areas F, G, and C are included as the disposal areas for Plan C.

153. As a result of the "trade-off" analysis conducted above, Plan C consists of widening the Savannah Harbor from 400 to 500 feet wide from Fig Island turning basin to Kings Island turning basin. This widening under Plan C would be accomplished using timed dredging--no dredging from February to May--and disposal areas F, G, and C. The contributions and impacts of this particular plan are summarized on tables D-5 and D-6 under Plan C, and a cost estimate is provided in table D-7.

SELECTING A PLAN

154. In the preceding pages, four possible solutions were initially considered in the development of plans to address the problems and needs of the study area. Of the possible solutions, the plan for widening Savannah Harbor was selected as the most responsive to the problems and needs of the area. This plan was then analyzed to develop a plan that maximizes National Economic Development (NED) and a plan that maximizes the enhancement of Environmental Quality (EQ) using the widening as a base condition. Following the assessment of the impacts associated with the NED and EQ plans, an evaluation of the two plans was made to determine the beneficial and adverse contributions of each plan. Based on this evaluation, Plan C was developed in an effort to arrive at an optimum trade-off between the NED and EQ plans.

155. Tables D-5 and D-6 presented earlier provide summaries of the impacts and contributions associated with each plan. In analyzing the tables and preceding discussion, it becomes apparent that the NED plan represents the

TABLE D-7
SUMMARY OF ESTIMATED COST
PLAN C

Feature		Cost
Dredging		
Reach 1 Area C		
344,000 c.y. @ $1.50/c.y.		$516,000
Reach 2 Area F(a)		
476,000 c.y. @ $2.05/c.y.		976,000
Reach 3 Area F(b)		
512,000 c.y. @ $1.40/c.y.		717,000
Reach 4 Area C		
472,000 c.y. @ $2.50/c.y.		1,180,000
Reach 5 Area C		
286,000 c.y. @ $2.50/c.y.		715,000
Reach 5 Area G		
861,000 c.y. @ $1/c.y.		861,000
Subtotal		$4,965,000
Additional Mobilization and Demobilization		100,000
Subtotal		$5,065,000
Contingencies (15%)		760,000
Subtotal		$5,825,000
Engineering and Design (8%)		466,000
Supervision and Administration (6%)		350,000
Total Dredging Cost		$6,641,000
Navigation Aids		20,000
Relocations		123,000
Clearing and Removal of Improvements		151,000
Lands and Damages		2,894,000
Disposal Areas		
Easements	$371,000	
Dikes and Wasteweirs	145,000	516,000
Total Estimated First Cost of Plan C		$10,345,000

most economical means of widening the harbor. However, the plan does fail to make any beneficial contributions to the enhancement of the environment. Also, while the EQ plan does make beneficial contributions to the enhancement of the environment, it does so at the significant expense of the NED account. Plan C represents the trade-off between the NED and EQ plans in order to develop a plan that makes beneficial contributions to the enhancement of the environment but maintains its economic efficiency.

156. In comparing the three plans and the costs and impacts associated with each, Plan C represents an optimum level of improvement for the harbor by providing beneficial contributions to all of the planning objectives while maintaining a high level of economic efficiency. Therefore, Plan C is designated as the selected plan.

SECTION E
The Selected Plan

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The Selected Plan

1. This section of Appendix 1 describes the plan of improvement selected in the previous section on formulation. An adequate plan description goes beyond a routine discussion of elements in the project plan and structures involved; it identifies all the significant effects of the project or plan, both favorable and unfavorable. In addition, it presents meaningful information on design, construction, and operation and maintenance as required for a reasonable understanding of the technical aspects of the plan. The economic aspects of the selected plan are presented in the following section.

PLAN DESCRIPTION

2. The selected plan was determined to be the most responsive and feasible means of accommodating the new generation of vessels calling and planning to call at the Port of Savannah within the scope of the authorized study. The plan provides for modification of the harbor by widening the navigation channel between the present upstream limit of the 500-foot channel (Fig Island turning basin) and the Kings Island turning basin from 400 to 500 feet. This plan would be accomplished by dredging the material in the following manner.

- Reach 1 would be dredged using a pipeline dredge and pumping the 344,000 cubic yards of material to Area C.

- Reach 2 would be dredged with a dragline and the 476,000 cubic yards of material would be hauled to Area F(a).

- Reach 3 would be dredged with a dragline and the 512,000 cubic yards of material would be hauled to Area F(b).

- Reach 4 would be dredged with a pipeline dredge and the 472,000 cubic yards of material would be pumped to Area C.

- Reach 5 would be dredged with a pipeline dredge, with 861,000 cubic yards of the material being pumped to Area G and the remaining 286,000 cubic yards of material being pumped to Area C.

The proposed widening is shown on plates E-1 through E-7. The 27 acres on Hutchinson Island to be taken by the widening would affect the property owners shown on plates E-9 through E-12.

DISPOSAL AREAS

3. Implementation of the selected plan would involve the dredging and disposal of approximately 2.95 million cubic yards of material. This material would be deposited on three selected disposal areas which would be diked and provided with wasteweirs where the material is to be pumped in. (See plate E-8.) Area F(a), a 38-acre tract near the Talmadge Bridge, can take about 8 feet of fill and would hold approximately 485,000 cubic yards of material. Area F(b), a 42-acre tract near the bridge, can also take about 8 feet of fill and would hold about 515,000 cubic yards of material. Area G, an 89-acre tract east of the old SCL Railroad Bridge, can hold about 861,000 cubic yards of material. Area C, a 140-acre tract located south of the Fig Island turning basin adjacent to President Street, can hold about 1,125,000 cubic yards of material. These lands are currently available as disposal areas for use by local assurers. The local assurer is aware of the responsibility concerning the furnishing of dikes and wasteweirs for the disposal areas.

RELOCATIONS

4. There are a number of docks, warehouses, and bulkheads on Hutchinson Island that would have to be removed to permit construction. These could

be rebuilt along the new pierhead-bulkhead line that would be established by the project. In the area of the proposed project, all new channel-side construction and major repairs to existing structures are being set back from the channel to provide room for the proposed project. The cost of existing structures, damages associated with them, and removal costs are included in the project costs. The companies and facilities on Hutchinson Island that would be involved in relocations consist of:

- The Atlantic Cement Company - about 1,500 square feet of concrete mooring dock and about 2,000 square feet of concrete walkway.

- Charter International - 100 feet of docking slip and severance damage.

- Georgia Kaolin (Mountain Properties, Inc.) -

  West side of slip #3 - 12,000 square feet of concrete and wood docks, 6,700 square feet of concrete loading ramp, 17,400 square feet of wood frame warehouse, and 450 linear feet of railway.

  East side of slip #3 - 36,000 square feet of wood dock, 15,000 square feet of concrete loading ramp, and 87,000 square feet of wood frame warehouse.

5. The bulkhead at the Savannah District's Engineer Yard would have to be relocated. However, replacement of the bulkhead is scheduled for Fiscal Year 1977 under the Operation and Maintenance program. This replacement is scheduled to take into account the necessary set-back for the proposed project. For this reason, cost of this replacement is not included in the cost of the selected plan. The marine railway at the Engineer Yard would have to be relocated and is included in the project cost.

6. There are two cables crossing the navigation channel. One is an electrical cable and one is a telephone cable. These cables serve utilities to the Hutchinson Island area. Each has been discussed with the appropriate owner and each has indicated that no problems exist in providing longer cables and perhaps moving the Hutchinson Island terminals. The electric company indicated that if the development occurs on Hutchinson Island as it is forecast, a substation will be built on the Island and the need for a submarine cable would be abolished. At present, there is a high voltage, overhead line crossing Hutchinson Island. The costs for modification of these cables are included in the project cost.

7. A radio transmitter antenna owned by WEAS Inc. is located near the channel on Hutchinson Island and one of the guy wires must be relocated. Discussions with the radio station offices indicate that the guy wire probably could not be moved the necessary distance. Therefore, real estate estimates take into account the necessary relocation of the facility. The facilities involved in the relocation would include the radio tower, the small concrete building that houses the transmitting equipment, the underground wire fields, and the power supply.

BRIDGES

8. Currently, there is only one bridge across Savannah Harbor. It is the Eugene Talmadge Memorial Bridge (U.S. Route 17A), a high-level fixed span with a vertical clearance of 136.7 feet at mean high water and a width of 600 feet between piers. However, this 600-foot horizontal opening is not located so that the proposed channel width of 500 feet can be located through the bridge. For this reason, the channel will be widened only to 450 through the bridge. This reduction of the widening would reduce the vulnerability of the north pier to damage from a direct collision by a vessel. The reduced channel width through the Talmadge Bridge has been discussed with

the U.S. Coast Guard (see letter in appendix 2) and the harbor pilots. Neither has indicated any problems with the alignment or the widening. A 50-foot widening on the southwestern side of the channel would be impractical because of the necessity of moving the existing pierhead-bulkhead line through a highly developed part of the harbor. Therefore, the new channel must be marked as indicated by the Coast Guard.

9. The Seaboard Coast Line Railroad Bridge spanned the harbor until it was struck by a vessel on the night of 23 April 1971 and collapsed. It was a vertical-lift single span with a single track. Subsequent clearing of portions of the bridge resulted in a 350-foot-wide channel through the bridge remains. Georgia Ports Authority has developed plans to have the remaining portions of the bridge removed. A contract for this removal is scheduled to be awarded in the near future. This removal will take into account the considered widening and will provide an unobstructed clearance in excess of 500 feet at the bridge site. Since the removal of the bridge is being accomplished now under the provisions of the Truman-Hobbs Act, no cost is applied to the project for modification of this bridge.

EVALUATED ACCOMPLISHMENTS

10. Several accomplishments would result from the proposed plan of improvement. Substantial transportation savings would be derived from implementation of the proposed widening plan for the harbor. The transit times experienced by ships utilizing this reach of the harbor would be reduced and the necessity for very strict arrival and departure time control would be lessened. The widened channel would permit increased vessel speeds resulting in reduced in-port operating time and costs and reduced tug assistance. This section of the harbor is very congested and the wider channel would permit easier maneuvering of vessels into and out of perpendicular slips located within this reach. Annual transportation savings attributable to the improvements are $932,000. (See section F for economic analysis.)

11. Wages paid to unemployed or underemployed labor hired from within the immediate vicinity during construction is credited to the project as redevelopment benefits. Annual redevelopment benefits amounting to $5,000 are estimated to accrue from the project installation.

12. The land to be used as disposal areas for the construction of the project is zoned for industrial purposes. Although this land is considered high land, most of it is below the elevation of the 100-year hurricane surge. As the dredged material is placed on this land and the elevation is raised above the hurricane surge elevation, the land value would be enhanced. It is estimated that the value of approximately 309 acres of land would be enhanced about $2,500 per acre. The annual enhancement is valued at $49,000.

EFFECTS ON THE ENVIRONMENT

13. The effects on the environment resulting from the implementation of the proposed plan of navigation improvements to Savannah Harbor would be related to the dredging operations and the necessary material disposal.

14. The proposed plan calls for the dredged material to be placed on disposal areas C, F, and G. The material to be disposed of generally consists of sand, gravel, and silt, with some clay sediment deposits. On reaches 2 and 3, between the Engineer Yard and the Talmadge Bridge, there is a large amount of old piling, debris, and discarded construction materials that would be removed using a dragline. These materials would be placed at the bottom of the fill materials that are to be placed in Areas F(a) and F(b).

15. Since the disposal of materials in Area F would involve the use of truck dumping, dikes and wasteweirs would not be required. The disposal

of material in Areas C and G would involve a pipeline dredge with the material being pumped into the areas. These areas would be diked and provided with wasteweirs to restrict the flow of water out of the disposal area. The proposed disposal areas comprise a total of 309 acres and have a total capacity of about 2,986,000 cubic yards based on the height of fill desirable.

16. Area F(a) comprising 38 acres and F(b) comprising 42 acres were last used as disposal sites about 15 years ago. These areas have revegetated and are now covered with a thick growth of small trees, vines, shrubs, and herbaceous plants. The drainage ditch located on the west side of the property has various aquatic plants in it. The area has good wildlife habitat for small animals. This area would be filled approximately 8 feet with the material dredged from reaches 2 and 3. This material would be brought to the disposal site via trucks and dumped onto the area. Dikes and wasteweirs should not be required.

17. Area G (89 acres) is located on Hutchinson Island approximately 1 mile west of the Talmadge Bridge. The area was recently used as a disposal site and is presently covered with herbs and shrubs. This area provides only limited wildlife habitat. The material that would be placed in this site would be dredged from reach 5 with a pipeline dredge and pumped into the area. Approximately 10,800 linear feet of dike about 9 feet high would be required. The depth of fill would be about 6 feet. Area G would require three wasteweirs. Two would be for the larger area and would be located on the north side of the site. One would be for the smaller area of G between the railroad tracks. This weir would also be located on the north side of the site.

18. Area C (140 acres), located about one-half mile south of the Fig Island turning basin, is a low area vegetated with an early successional forest interspersed with open areas of herbaceous plants. The area has

been greatly disturbed and suffers from municipal pollution. The canals crossing the area are somewhat stagnant and provide a source of mosquito breeding. The area has fair wildlife habitat on it for small animals. The material that would be placed on this site would be dredged from reaches 1, 4, and 5 and pumped to the site. Approximately 10,000 linear feet of dike about 8 feet high would be required in this area. The area would also require two wasteweirs to drain the water back to the river.

19. Approximately 27 additional acres of terrestrial habitat would be destroyed by the widening of the channel. This area is located along the northern bank of the channel running most of the length of the channel reach to be widened. Vegetation in this area consists mainly of the types found in disposal areas F and G. Although this area is river shoreline, it does not support any tidal marsh.

20. There are three distinct environmental aspects of dredging in the proposed project area which may lead to possible ecological damages. These are as follow: (1) The destruction of bottom habitats in the dredged area; (2) alteration of habitats due to deposition of dredged material; and (3) water quality impairment of the surrounding waters during the dredging operation.

21. The effects of the first aspect of dredging listed above cannot be minimized; therefore, once the decision is made to dredge the area, based on social, economic,and environmental considerations prior to the dredging operations, this damage is inevitable. However, the damage to bottom habitats and their benthic communities is temporary. According to the studies made by Robert R. Stickney and Daniel Perlmutter[1], maintenance dredging of the Atlantic Intracoastal Waterway through Georgia appears to have a short-lived impact on the benthic infauna (organisms which cannot demonstrate an effective avoidance pattern) of the dredged channel, at least in areas having soft sediments. Complete, or nearly complete,

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[1] Stickney, R. R. and D. Perlmutter, April 1975. Impact of Intracoastal Waterway Maintenance Dredging on a Mud Bottom Benthos Community. Biological Conservation, Vol. 7, No. 3: 211-226.

removal of benthos is effected by dredging, although recovery begins within a month following the dredging operation. Diversity and species composition rapidly return to their pre-dredging levels.

22. The mechanisms of recolonization are not understood but two processes seem likely. Movement of benthic organisms into the dredged area by the settling of larval, juvenile and adult animals from the water column is one method of recolonization. Secondly, after dredging, the walls of the new channel slump to some extent. Benthos inhabiting adjacent bottom may be carried into the channel bottom area along with the slumping sediments. The area to be dredged, as compared to the total area of the Savannah Harbor, is relatively small.

23. The dredging activities anticipated for the proposed project would not have any long-term effects on the ichthyofauna and benthic macroinvertebrates. Stickney[2] (1972) reported that if dredging of the Intracoastal Waterway in Georgia has any effect on the vertebrate and invertebrate organisms captured by otter trawling, his investigations were not able to demonstrate them. Diversity of species was obtained through the utilization of two indices. The data obtained from the diversity indices failed to demonstrate any long-term effects of dredging.

24. The second possible ecological damage resulting from dredging is the alteration of habitats due to deposition of dredged material. Approximately 2.95 million cubic yards of material would be deposited on three land disposal sites. This deposition would destroy the existing habitat on these areas which comprise about 309 acres. The destruction would be

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[2] Stickney, R. R., July 1972. Effects of Intracoastal Waterway Dredging on Ichtyofauna and Benthic Macroinvertebrates. Georgia Marine Science Center Technical Report, Series Number 72-4.

complete with from 6 to 8 feet of fill being placed over the existing vegetation. New habitat would be established as the area revegetates. However, this habitat would be that associated with the higher land elevation.

25. Area G would be the least affected since there is only a limited amount of vegetation on it. The area is already at about elevation 9 feet mean sea level (msl). Therefore, the vegetation that did grow back would be similar to that which is growing there now. Area F is covered with various vegetation associated with early successional growth. The placement of 8 feet of fill on this site would change some of the growth patterns that currently exist. There are some low areas near the drainage canals that have lowland and aquatic-type vegetation on them. This vegetation would probably not reappear after filling. The vegetation that would appear would be similar to that presently growing on Area G.

26. Area C has a successional forest on it that is associated with low areas. Much of the area has standing water on it that supports numerous aquatic species. The area is not marsh and there is very little tidal influence. The limited tidal influence is due to the tidegates at the drainage canal outfall. These were built to help control flooding in the area. The area is suffering from municipal pollution but provides fairly good wildlife habitat. Filling the area would result in more of an upland-type vegetation developing on the area. The low, wet habitat that exists now would be completely destroyed. The new habitat that would be found with the natural revegetation would be similar to that now growing on Area G.

27. The third environmental aspect of dredging in the proposed project area which may lead to possible ecological damages is the water quality impairment of the surrounding waters during the dredging operation. To evaluate the impact of dredging on the impairment of water quality,

chemical analyses and the standard elutriate test were made on sediment and water samples collected in the project area (see figure E-1 and tables E-1 and E-2). According to EPA guidelines, section 230.4-2 (Federal Register, Vol. 40, No. 173, September 5, 1975), the District Engineer will compare the concentration of appropriate constituents to applicable narrative and numerical guidance contained in such water quality standards as are applicable by law. The appropriate constituents considered were Hg, Pb, Zn, total Kjeldahl nitrogen, volatile solids and COD. None of the samples taken in the project area failed the elutriate test in Hg, Pb, Zn, or nitrogen after an application of a factor of 10 dilution (actual dilution which would occur during the disposal of dredged material would be far in excess of the tenfold dilution factor employed in the elutriate test). The results of the elutriate test indicated that the discharge of dredged material would not be harmful to man, fish, game, or other beneficial aquatic life. The dredged material will be placed either in diked areas or dumped on land areas by truck. Windom[3] (1972) reported that in sediments to be dredged there exists a large concentration of reduced iron (Fe++). When this iron is dredged and thrown into suspension, it is immediately oxidized, forming iron hydroxide in the marine environment due to the high alkalinity. The iron hydroxide is a colloidal gel capable of scavenging other metals or oil-grease-laden particles out of solution and precipitating these metals along with the iron so that they accumulate in the sediments of the disposal area.

28. Corresponding changes in water quality during dredging operations cannot be predicted simply on the basis of chemical analyses of the sediments. Research by Skidaway Institute of Oceanography, conducted during 1971 in the Savannah River, showed that values for heavy metals from bottom sediments and amounts of the same elements in the water column during dredging could not be correlated. Samples were taken from bottom sediments, the river upstream from the dredge, the dredge discharge pipe, and the effluent from the weir outlet. Heavy metal parameters for these samples

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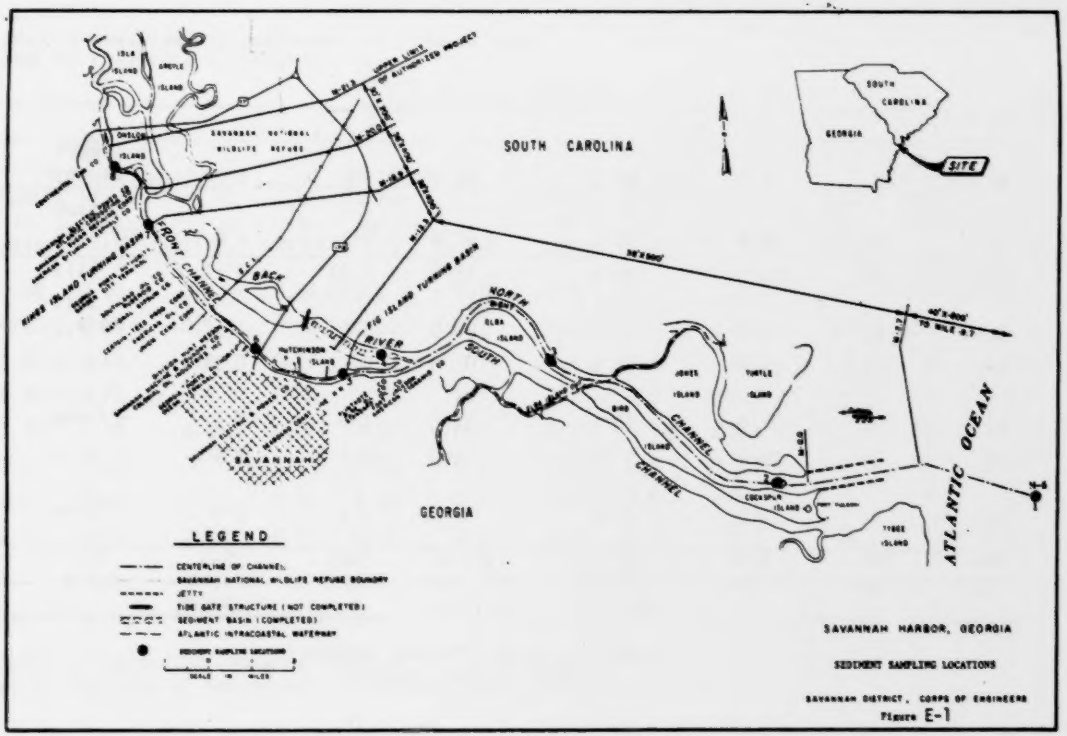
[3] Windom, Herbert L., June 1972. Proceedings of Symposium on Planning and Engineering in the Coastal Zone. Coastal Plains Center for Marine Development Service.



SAVANNAH HARBOR, GEORGIA

SEDIMENT SAMPLING LOCATIONS

SAVANNAH DISTRICT, CORPS OF ENGINEERS

Figure E-1

TABLE E-1
SAVANNAH HARBOR, GEORGIA
CHEMICAL COMPOSITION OF SEDIMENTS

Station number	Grain size	Volatile solids (6%)	COD (5%)	Total K nitrogen (0.10%)	Oil and grease (0.15%)	Hg ppm	Pb ppm	Zn ppm
1	Sandy - silt	6.2	4.7	0.06	0.09	0.03	12	74
2	Silt	6.6	4.8	0.14	0.14	0.05	26	93
3	Sandy - silt	5.5	4.3	0.10	0.21	0.10	22	70
4	Silt	15.0	13.6	0.36	0.95	0.10	41	140
5	Clayey - silt	20.0	19.5	0.28	0.87	0.10	39	120
6	Silt	17.0	15.9	0.21	0.46	0.10	27	120
7	Sand and gravel	0.7	1.5	0.05	0.09	0.02	9	31
8	Coarse sand	0.7	2.6	0.04	0.08	0.01	8	28

NOTE: Samples collected 21 September 1975.
Samples analyzed 22 September - 4 October 1975.

TABLE E-2
SAVANNAH HARBOR, GEORGIA
ELUTRIATE TEST RESULT

Station number	Total K nitrogen (ppm)			Hg (ppb)			Pb (ppb)			Zn (ppb)		
	Conc. in water	After mix-ing	Ratio*	Conc. in water	After mix-ing	Ratio*	Conc. in water	After mix-ing	Ratio*	Conc. in water	After mix-ing	Ratio*
1	0.06	0.40	0.7	0.01	0.2	0.2	0.3	0.3	0.1	17	15	0.1
2	0.20	0.25	0.1	0.02	0.02	0.1	0.6	0.5	<0.1	21	25	0.1
3	0.30	0.40	0.1	0.02	0.02	0.1	0.1	0.6	0.6	16	6	<0.1
4	0.30	1.95	0.6	0.03	0.03	0.1	0.3	0.2	<0.1	26	10	<0.1
5	0.30	1.40	0.4	0.02	0.03	0.1	0.4	0.3	<0.1	3	25	0.9
6	0.65	1.60	0.2	0.04	0.05	0.1	0.6	0.5	<0.1	6	2	<0.1
7	0.62	0.68	0.1	0.01	0.02	0.2	1.0	0.8	<0.1	2	3	0.1
8	0.50	0.70	0.1	0.01	0.02	0.2	0.3	0.8	0.3	5	4	<0.1

*Ratio after allowing for 10-fold dilution.

NOTE: Samples collected 21 September 1975.
Samples analyzed 22 September - 4 October 1975.

did not exceed EPA limits for dredging operations (Windom, 1972). The paper by Windom also noted that "the quality of the effluent from the weir outlet is essentially identical with that of the river water with the exception that the weir outlet water has a slightly higher pH and a considerably higher dissolved oxygen concentration."

29. An increase in suspended solids and in turbidity may be encountered in the immediate vicinity of dredging and may persist for a limited period following termination of dredging activities; however, no significant degradation in water quality is anticipated from these increases. Due to current velocities and the rapid flocculation of suspended material, interference with light penetration and productivity will be limited to the time the dredge is operating and for a brief period thereafter. Standards for turbidity have been established by the Environmental Protection Agency and adopted by the U.S. Army Corps of Engineers. Table E-3 shows dredge turbidity measurements taken in the Savannah Harbor Turbidity measurements reported by the Georgia Department of Natural Resources at U.S. Highway 17 (mile 21.6), which is above the project, and at Fort Jackson (mile 11) are found in table E-4.

TABLE E-3
DREDGE TURBIDITY MEASUREMENTS, SAVANNAH HARBOR, GEORGIA
TURBIDITY IN JACKSON UNITS (JTU)
DISTANCE DOWNSTREAM OF DREDGE

Depth of Measurement	Cutterhead[1/]	50 ft.	500 ft.	1,000 ft.	1,500 ft.	Background
			MEASUREMENTS TAKEN 6 MARCH 1974			
3 feet	18 JTU	19 JTU	18 JTU	16 JTU	16 JTU	17 JTU
10 feet	17 JTU	19 JTU	19 JTU	16 JTU	16 JTU	16 JTU

[1/] The cutterhead depth was between 35 and 41 feet. Dredge was at mile 9.14.

TABLE E-4
TURBIDITY MEASUREMENTS, SAVANNAH RIVER
TURBIDITY IN JACKSON UNITS (JTU)

Date	U.S. Highway 17 (mile 21.6)	Fort Jackson (mile 11)	
	3-foot depth	3-foot depth	20-foot depth
7/2/74	25 JTU	42 JTU	63 JTU
8/13/74	25 JTU	25 JTU	32 JTU
9/3/74	16 JTU	13 JTU	10 JTU
11/5/74	11 JTU	16 JTU	18 JTU
12/4/74	28 JTU	28 JTU	84 JTU

Source: Environmental Protection Division, 1975.

30. The proposed project is not expected to have any long-term adverse visual or aesthetic impacts. During the construction, it is conceivable that some adverse visual and aesthetic impacts would occur due to the presence of the dredge and pipelines. However, these impacts would be short-term and they could be considered to be a part of the normal activities associated with a working harbor. After the project is completed, the visual and aesthetic qualities of the area would gradually return to the preproject conditions as the disposal areas revegetate. Thus the area would not be changed as to the aesthetic qualities.

31. The proposed program would have a relatively minor overall impact on the wildlife of the area. No major wildlife resource exists within the disposal areas. The mammals inhabiting the areas are limited in number and include rabbits (Sylvilagus palustris), raccoons (Procyon lotro), opossums (Didelphis marsupialis), and various rat and mice species. As disposal activities are begun in an area, those animals that could escape would move into the surrounding areas. Those animals that could not escape would be killed. The displacement of the animals to the surrounding areas would tend to overload these areas in terms of their wildlife support capability. In severe cases, some animals might die from overpopulation of an area. However, as the natural vegetation returned to the disposal sites, the wildlife would spread back out into these areas. It should be noted that

each new increment of dredged material creates conditions which are ideal for shore birds.

32. Each spring and fall, the Front River, Back River, North Channel, South Channel, and the numerous interconnecting tidal streams are hosts to two anadromous species of commercial and/or sport fishes; namely, shad (Alosa spp.) and striped bass (Morone saxatilis). Construction and maintenance dredging are not anticipated to have any significant adverse impact upon either the population or spawning habitat of these anadromous species of the Savannah River and its tributaries. Corps personnel have observed spawning migrations while dredging operations were ongoing. Migrating striped bass and shad periodically pass the construction sites when traveling upriver to spawning areas. The harbor width varies from approximately 800 to 1,000 feet, which provides ample swimming area for these anadromous species during dredging operations. However, F&WS and EPA have suggested that no dredging work be performed in the channel during the months of February through May so as not to interfere with the spawning migrations. The proposed plan includes provisions to halt dredging from February to May to eliminate the possibility of any interference with the migrations.

33. The National Register of Historic Places has been consulted and particular sites have been identified. The two sites bordering the river, Fort Jackson and Fort Pulaski, would not be affected by this project. Likewise, the proposed action would not adversely affect any existing, proposed or known potential units of the National Park System or any known historic or natural sites eligible or considered potentially eligible for the National Landmark Program.

34. Few land use changes would result from the implementation of the proposed improvement. Parts of the Savannah River and approximately 27 acres of terrestrial land on the northern bank of the river would be converted to channel and channel side slope. The ground elevation of areas used for dredged material disposal would be raised. As stated above, the areas used for dredged material disposal are zoned for commercial and

industrial use. Construction of the proposed improvement requires the removal and disposition of approximately 2.95 million cubic yards of material, the equivalent of approximately one-half year of maintenance from the inner Savannah Harbor. The development of lands adjacent to the harbor as commercial and industrial complexes may accelerate as a result of the proposed action. However, the changes that might take place will depend on the economy, ownership, location, and local requirements and controls.

35. The ground-water supply in the Savannah area is available from two sources--a relatively shallow ground-water table and a deeper artesian aquifer. The majority of the water supply for domestic and industrial use is obtained from the deeper artesian aquifer in the Savannah area. River water and the shallow ground-water table are prevented from entering the artesian aquifer by an impermeable bed of silts and clays (aquiclude) 150-200 feet thick overlying the artesian aquifer. The proposed plan should have no effect on either the shallow water or deeper aquifer.

EFFECTS ON SOCIAL WELL-BEING AND REGIONAL DEVELOPMENT

36. The effects on social well-being brought about by the proposed widening of Savannah Harbor should be measured in terms of impact on real income, security of life, health, and safety, education, cultural and recreational opportunities, emergency preparedness, and other factors. It is difficult to assess these project impacts quantitatively because of the tremendous time, money, and effort involved in gathering and interpreting data indicative of existing conditions. This assessment is, therefore, qualitative in nature.

37. Real income refers to the purchasing power of individuals and families in a given geographic area. The people of Savannah Harbor's primary area of influence are generally less well off in terms of purchasing

power than the people of the State of Georgia as a whole or the United States as a whole. As has been brought out, Savannah Harbor is extremely important as a source of employment and income to the primary area population, since the import and export of source materials and finished products are crucial to much of the area's economic activity. The reduction in vessel transit times anticipated to occur as a result of channel widening can therefore be expected to enhance the purchasing power of primary area residents through the stimulation of increased industrial activity and reduced shipping costs.

38. Security of life, health,and safety may be measured in terms of crime, mortality, and even accident insurance rates. Numerous studies have been completed by sociologists indicating that crime rates increase with unemployment and that the general health of the populace declines with purchasing power. In the instance of Savannah Harbor, widening of the channel will at least maintain area employment and purchasing power levels and should therefore influence area crime rates and health services positively. The use of disposal area C should reduce the potential for an encephalitis problem in this area. This would have significant benefits on the health of the community. The primary safety impact of harbor widening, however, will be much more apparent in the safer passage, handling, and maneuvering of the larger and larger ships now utilizing and continuing to utilize harbor facilities. Unless widening occurs, conditions will become increasingly hazardous as more and more tonnages move through the harbor in more and larger ships.

39. Education, like life, health, and safety, may be measured in direct relationship with area purchasing power. The enhancement of area purchasing power by widening should make more funds available in the area for educational facilities and services. As has already been brought out, the City of Savannah is one of the oldest cultural centers in the Nation. The city's existence and growth are directly related to activity in the harbor. Encouragement and enhancement of that activity can only enhance primary area opportunities for education, culture, and recreation.

40. Other factors indicative of social well-being, such as overall quality of life as exemplified by a sense of community cohesiveness, civic pride, racial prejudice or lack of it, quality of government, etc., would be enhanced by harbor widening to some degree, at least to the extent that local cooperation to bring about widening will accomplish a sense of community cohesiveness.

41. Modification of Savannah Harbor may be important or even crucial to national emergency preparedness. In the event of natural or wartime emergencies, harbor facilities may be called upon in any number of ways to alleviate hazardous conditions or to aid in movement of men, munitions, and supplies to and from the military installations located in the harbor's primary area of influence.

42. The effects on regional development brought about by the proposed Savannah Harbor widening project should be measured in terms of the area's income, employment, population, economic base, environment, and social development. Discussion of these indicators in terms of existing and projected conditions throughout this study indicates that the harbor's primary area of influence will experience positive impacts in terms of employment, income, population, economic base (export of locally manufactured goods) activity, and social development. It is concluded that the proposed Savannah Harbor widening project will have positive impacts on social well-being and on regional development within the project's primary area of influence, and even for the Nation as a whole because of this area's value as a national historical and cultural center.

OTHER EFFECTS

43. The effects of the proposed plan on shoaling in the harbor were determined indirectly through an analysis of the model study results contained in Technical Report No. 2-580.[4] Based on an increase in the flow area of the Front River channel, shoaling in this area should increase similar to the results indicated in the model studies for increased flow areas. However, as indicated in the model studies, a small increase in flow area similar to that of the widening would generate only a small increase in shoaling in that particular reach with the overall effect on shoaling being mainly negligible.

44. The effects of the proposed plan on flow velocities in the Front River area are estimated to be inversely proportional to the increase in flow area. Based on model studies of other increases in flow areas, the average velocities should decrease by less than 0.5 feet per second.

DESIGN

45. In selecting a desirable incremental width for widening the reach of the navigation channel between Fig Island turning basin and Kings Island turning basin, due consideration was given both to public and Federal interests. The channel addition would conform with the existing project. It would have side slopes of 1 vertical to 3 horizontal and a channel depth of 38 feet with 2 feet of overdepth dredging.

46. In Savannah Harbor, the primary design criteria used to establish an adequate channel width was the requirement for single lane or double

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[4] Technical Report No. 2-580, Savannah Harbor Investigation and Model Study, Volume III; H. J. Rhodes & H. B. Simmons, U.S. Army Engineer Waterways Experiment Station, Corps of Engineers; March 1965.

lane traffic. Due to the size of some of the container vessels now calling at the port, initial consideration was given to the adequacy of a single lane channel to accommodate these larger vessels.

47. The design ship for the single lane channel was taken as a typical container ship of the MARU class with a length of 863 feet, a beam of 105 feet, and a draft of 38 feet. Using the procedures and guidelines set forth in Report No. 3,[5] the channel was divided into three lanes, a maneuver lane and two bank clearance lanes. The width of the maneuver lane was based on the vessel size, vessel speed, wind and current action, and controllability of vessel. Based on the vessel described above moving at a speed of 5-7 knots with negligible lateral effects due to wind and current and with average to poor controllability, the width of the maneuver lane was determined to be 180 percent of the vessel beam, or 189 feet. The width of the bank clearance lane was based on the controllability of the vessel, channel size, channel restrictions, and shoaling conditions. This resulted in a bank clearance lane width of 150 percent of the beam, or 158 feet. These lane widths provided for a single lane channel width of 500 feet for the larger vessels.

48. Consideration was also given to the requirements of two-way traffic or a double lane channel. Since there is a large number of smaller vessels that call at the port, provisions for two-way

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[5] Report No. 3, "Evaluation of Present State of Knowledge of Factors Affecting Tidal Hydraulics and Related Phenomena," C. F. Wicker, Editor; Committee on Tidal Hydraulics, Corps of Engineers, U.S. Army; May 1965.

traffic for these vessels reduces inport time and increases efficiency. The design vessel for the double lane channel was taken as a typical cargo ship with a length of 550 feet, a beam of 75 feet, and a draft of 32 feet. Using the procedures set forth in Report No. 3, the channel was divided into five lanes: two maneuver lanes, a ship clearance lane, and two bank clearance lanes. The maneuver lanes were based on the criteria presented earlier and set at 180 percent of the vessel beam, or 135 feet. The ship clearance lane was set at the minimum of 100 feet. The bank clearance lanes were considered to be 100 percent of the vessel beam, or 75 feet, due to the presence of tugs to assist in passing. This resulted in a channel width of 520 feet for the double lane channel for the smaller vessels.

49. A summary of the channel width determinations is provided in table E-5. It should be noted that the width requirement for double lane traffic is met by the channel width established for single lane traffic at the deeper draft. At a depth of 32 feet, considering the 3 horizontal to 1 vertical side slopes and the additional 6 feet of depth available from the 38-foot channel (38-foot channel depth minus 32-foot vessel draft gives 6 feet), the available width is 536 feet if berthing areas do not interfere. (500+2x3(slope)x6(depth)=536)

TABLE E-5

CHANNEL WIDTH

	Width			
Channel Type	Maneuver Lane (ft.)	Ship Clearance Lane (ft.)	Bank Clearance Lane (ft.)	Total (ft.)
Single Lane	189	-	158	505[1]
Double Lane	135	100	75	520

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[1] For design purpose, say 500 feet.

50. The lower 13 miles of the navigation channel from the Atlantic Ocean to Fig Island turning basin have an authorized minimum width of 500 feet. The 100-foot reduction in width within the inner harbor is not consistent with design of other similar ports within the Southeast. A review of channel and harbor dimensions for other major southeastern ports indicates that inner harbor areas generally provide navigational maneuver areas of greater width than 500 feet. These wider areas are observed in several ports with approach or bay channels with widths of 400 feet or less. This study of similar waterway characteristics as recommended in EM 1110-2-1607 provides further basis for providing additional width within the reach of Savannah Harbor between Fig Island and Kings Island turning basins.

51. The modified navigation channel would be constricted to 450 feet in width through the Eugene Talmadge Memorial Bridge (U.S. Route 17A) area. (See plates E-1 through E-6.) This design would prevent undermining of the fender system which was recently installed to protect the north bridge pier adjacent to the channel from being damaged by any large vessel accidentally straying from the navigation channel.

52. Upstream of the Eugene Talmadge Memorial Bridge there is currently a cleared 350-foot-wide navigation channel at the site of the former Seaboard Coast Line Railroad Bridge. Plans have been developed and a contract will be awarded in the near future by the Georgia Ports Authority for the removal of remaining portions of the bridge. This removal will allow an unrestricted 500-foot navigation channel.

SUBSURFACE INFORMATION

53. The material which would be dredged from the channel widening contains no rock. It consists of silt, soft blue clay, gravel and coarse to fine sand. There is some hard material in the vicinity of the Kings Island turning basin; however, it can be removed by a

pipeline dredge without blasting. The hard material in the area is composed of fat silt, sand, silty sand, hard clay, and fine sand and mica. This information was obtained from the District's files on the harbor's widening and deepening study (H.D. 226, 89th Cong., 1st sess.)

CONSTRUCTION

54. If the proposed widening project for Savannah Harbor is authorized, it is estimated that the design and construction of the modification could be completed within several years. The preconstruction planning (or advanced engineering and design) phase would be done in three stages as shown on plate E-13. The first stage consists of the Phase I General Design Memorandum and involves the reanalysis of the project to determine whether or not the plan presented in the feasibility report should be modified. The second stage consists of the Phase II General Design Memorandum which involves the detailed design necessary to construct the project. Based on this design, the third stage of preparation of plans and specifications would be accomplished after which bids could be invited and contracts awarded to construct the project.

55. Widening the Savannah Harbor in accordance with the proposed plan of improvement would involve the loss of about 27 acres of land from along the northern bank, shoreward from the present low waterline. In addition, there are a number of docks, warehouses, and bulkheads which would need to be removed. A pipeline dredge would be utilized to widen the reach from the Fig Island turning basin to the Engineer Yard and from the Talmadge Bridge to the Kings Island turning basin. This material would be pumped into Areas C and G. Although Area G is readily accessible, pumping to Area C would require additional booster pumps along the line. The reach from the Engineer Yard to the Talmadge Bridge would be dredged with a dragline and the material would be hauled to Area F. This type of construction is considered appropriate because of the difficulty expected in removal of debris and piling located along this area. An overdepth of 2 feet will be allowed to account for dredging inaccuracies.

56. To minimize the adverse impacts of the migrating fish that spawn in the spring, the dredging activities would be halted during the period February to May. Other dredging techniques would be coordinated with appropriate Federal and State agencies to minimize the adverse effects on the environment.

OPERATION AND MAINTENANCE

57. It is anticipated that widening the harbor would cause no appreciable increase in the amount of shoaling (total) in Savannah Harbor. Savannah Harbor for all practical purposes is a closed system with an average annual sedimentation rate of approximately 8.1 million cubic yards, based on past records. Sediment is transported into the harbor from the Savannah River flow, from the ocean on the flood tide, and from the surrounding peripheral area. Widening Savannah Harbor as proposed would not produce any significant effect on these inflows of material. Therefore, the overall shoaling in the harbor should not be significantly affected and no additional dredge maintenance or maintenance disposal areas should be required for operation and maintenance of the harbor.

SECTION F
Economics of Selected Plan

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Economics of Selected Plan

1. The purpose of this section of the appendix is to centralize the economic aspects of the selected plan, costs as well as benefits. The material presented in the following pages concerns only those facets of the proposed improvement which can be quantified in dollar values.

METHODOLOGY

2. The tangible economic justification of the proposed improvements can be ascertained by comparing the equivalent average annual charges (i.e., interest, amortization, and maintenance costs) with an estimate of the equivalent average annual benefits which probably would be realized over the 50-year period of analysis selected. The average annual benefits preferably should equal or exceed the annual costs if the Federal Government is to contribute toward the project.

3. The values given to benefits and costs at their time of accrual are made comparable by conversion to an equivalent time basis using an appropriate interest rate. An interest rate of 6-3/8 percent applicable to public projects was used in this report. The net effect of converting benefits and costs in this manner is to develop equivalent average annual values.

4. A number of economic and physical forces limit the economic life of the project, such as shoaling, obsolescence, changing requirements for the project services, and inaccuracies in making overly long projections. Based on these factors, an economic life of 50 years was selected for project analysis.

5. The development of costs and benefits follows standard Corps of Engineers' practice. All goods and services used in the development of the

project are estimated in monetary terms. Benefits resulting from increased vessels' efficiencies would be reflected as transportation savings and ultimately passed on to the consuming public of these goods and associated services. Increased land values associated with spoil areas were also evaluated.

COSTS

FIRST COSTS

6. The summary of estimated first costs of the recommended plan for modification of the harbor is shown in table F-1. Quantities of dredged material and other principal construction items needed for the selected plan were estimated on the basis of preliminary designs. Location of the navigation aids would be implemented by the U.S. Coast Guard. The estimates of first costs are based on July 1976 price levels for comparable type construction. The project estimates include a 15 percent contingency factor, an 8 percent engineering and design factor, and a 6 percent supervision and administration cost factor.

7. The dredging quantities shown include a 2-foot allowable overdepth for dredging inaccuracies. The unit costs shown for dredging are based on the dredging and disposal plan presented earlier and as shown on the table.

8. The present fair market value of the existing properties and improvements affected by the project and the cost of their removal was determined. These costs were used in the economic analysis and in the determination of the total Federal and non-Federal Cost. While it is apparent that much of the land easements needed for disposal area will be available at no cost to the local assurer, estimated easement costs are included in the estimated cost of the project. Based on information discussed in other parts of this report, no modification of the Talmadge Bridge is necessary, therefore no costs are included. There are no costs attributable to the project for removal of remaining portions of the Seaboard Coast Line Railroad Bridge or for the relocation of the bulkhead at the Corps of Engineers Yard located on Hutchinson Island.

TABLE F-1
SAVANNAH HARBOR
SUMMARY OF ESTIMATED FIRST COST

		Cost
Dredging		
Reach 1 - Disposal Area C		
344,000 C.Y. @ $1.50/C.Y.		$516,000
Reach 2 - Disposal Area F(a)		
476,000 C.Y. @ $2.05/C.Y.		976,000
Reach 3 - Disposal Area F(b)		
512,000 C.Y. @ $1.40/C.Y.		717,000
Reach 4 - Disposal Area C		
472,000 C.Y. @ $2.50/C.Y.		1,180,000
Reach 5 - Disposal Area C		
286,000 C.Y. @ $2.50/C.Y.		715,000
Reach 5 - Disposal Area G		
861,000 C.Y. @ $1/C.Y.		861,000
Subtotal		$4,965,000
Additional Mobilization and Demobilization		100,000
Subtotal		$5,065,000
Contingencies (15%)		760,000
Subtotal		$5,825,000
Engineering and Design (8%)		466,000
Supervision and Administration (6%)		350,000
Total Dredging Cost		$6,641,000
Navigation Aids		$20,000
Relocations		
Marine Railway at Engineer Yard	$102,000	
Electric Submarine Cable	15,000	
Telephone Submarine Cable	6,000	$123,000
Clearing and Removal of Improvements		$151,000
Lands and Damages		
Land 27 Acres @ $12,000/Acre		$324,000
Improvements		
Atlantic Cement Company	$60,000	
WEAS Radio Tower	120,000	
Charter International	325,000	
Georgia Kaolin		
West Side of Slip #3	360,000	
East Side of Slip #3	1,185,000	$2,050,000
Contingencies (20%)		475,000
Acquisition Cost (15 Tracts @ $3,000/Tract)		45,000
Total Lands and Damages		$2,894,000

TABLE F-1-Continued

Feature	Cost
Disposal Areas	
Easements for Disposal Areas	$371,000
Dikes and Wasteweirs	145,000
Total Disposal Areas	$516,000
Total Estimated First Cost	$10,345,000

ANNUAL CHARGES

9. Estimates of annual charges are based on an economic life of 50 years. Since it is estimated that the proposed construction operations could be completed in less than 2 years, no interest during construction was included with the estimate of first cost. An interest rate of 6-3/8 percent and an amortization period of 50 years were used in computing the annual charges for the project. No appreciable increase is expected in the total annual maintenance requirements of the harbor due to the widening. Therefore, no annual maintenance charges were included in the estimate of annual charges. Table F-2 shows the annual charges for the selected plan of improvement.

TABLE F-2
SAVANNAH HARBOR
ANNUAL CHARGES

Feature	Amount
Total investment cost	$10,345,000
Interest and amortization (.066789)	691,000
Annual maintenance	0
Total estimated annual charges	$ 691,000

BENEFITS

10. This section presents a derivation of benefits for the purpose of gaging the economic feasibility of the proposed modification of Savannah Harbor from a width of 400 feet to a width of 500 feet between Fig Island Turning Basin and Kings Island Turning Basin.

11. Benefits are expressed in terms of vessel operating costs and tug operating costs which will be reduced under "with-project" conditions. The value of the cost reductions is derived by multiplication of time saved by vessel and tug hourly operating costs. Benefits are calculated first for existing conditions, then in ten-year increments throughout a fifty-year project life.

12. The first step in calculating the cost related to vessel speeds and tug assistance required for vessels calling at Savannah Harbor involved the calculation of future fleets by vessel type. This was done through careful consideration of world fleet projections, Savannah Harbor dimension limitations, and potential tonnages; the results are shown in tables B-26 through B-29. It should be noted that future tanker and dry bulk fleets were increased commensurate with increasing average DWT's. General cargo vessels, on the other hand, were allowed to increase their tons-per-vessel-trip, because of increasing general cargo activity in Savannah. These projected fleets by vessel type were examined by the Savannah Harbor Master Pilot. He indicated that the harbor, even with its present dimensions, could handle traffic indicated, but that shipping costs would increase with congestion and vessel sizes.

13. After projection of the Savannah Harbor fleet to the year 2030, it was necessary to identify that portion of the fleet affected by the proposed widening project. It was deduced from 1975 fleet data that 98 percent of general cargo and container vessels, 87 percent of dry bulk vessels, and 89 percent of liquid bulk vessels entered the affected portion of the harbor. These percentages were applied to total harbor deep draft tonnages and fleets by vessel type to derive appropriate affected fleets.

BENEFIT DERIVATION

14. Benefits were calculated based on existing and potential vessel speeds and associated tug costs. These benefits were derived in terms of the reduction in operating time and tug assistance time required while the vessel is traversing the portion of the harbor that is under study. The proposed widening would allow for an increase in vessel speed which would result in an overall reduction in the time required for the vessel to traverse that portion of the harbor. By associating this time savings with an hourly operating cost, the resulting reduction in vessel operating cost can be determined.

15. The computation of the estimated transportation savings is shown on tables F-3, F-4, and F-5. The computations are based on the assumption that smaller vessel which enter Savannah Harbor can turn around at Marsh Island Turning Basin, while the larger vessels must turn at Kings Island Turning Basin. The division of vessels based on where they turn is denoted on the computation tables by the classification of "long distance" and "short distance" with the first notation representing the trip to Kings Island Turning Basin and the latter representing the trip to Marsh Island Turning Basin. There are some vessels that must turn at Kings Island turning basin due to their docking location rather than their size. Vessels are not permitted to back up in the river channel. Therefore, those vessels that dock inland of Marsh Island Turning Basin must continue up to Kings Island Turning Basin in order to turn around. These vessels are also noted on the tables.

16. The savings thus derived are based on the increased vessel speeds and the reduced tug assistance. For vessels traveling the short distance (Marsh Island Turning Basin), the savings are based on reduction in transit time of 31 minutes for the vessel and its attending tugs (average 1.5 tugs per vessel). For vessels traveling the long distance (Kings Island Turning Basin), the savings are based on a reduction in transit time of 42 minutes for the vessel and its attending tugs (average 2 tugs per vessel).

17. These reductions in vessel transit times are based on an increase in vessel speed of two knots for the "with" versus the "without" project conditions. This speed differential was applied to existing average vessel speeds for both with and against the current conditions due to the tidal influence. In making the round trip up the harbor, it was assumed that one way would be with the current the other opposing the current. Therefore, two speed and time saved calculations are shown for each vessel transit thus reflecting a complete roundtrip.

18. These times and related two-knot speed differentials were derived after discussions with representatives of the Savannah Pilots Association, the St. Johns Bar Pilots Association, the Jacksonville District Corps of Engineers, and the Atlantic Towing Company. The one-way distance which must be travelled by smaller vessels turning at Marsh Island is 3.62 nautical miles, which covers the vessel trip within the confines of the 400' foot channel. The total one-way distance travelled to Kings Island Turning Basin is 4.94 nautical miles.

19. The Atlantic Towing Company was the source of the average hourly tug operating cost of $100. Other hourly vessel operating costs were derived from data and trends furnished by the Office, Chief of Engineers, Washington, DC. The time savings used in Tables F-3, F-4, and F-5 for all vessel types were calculated as follows:

Short-distance:

4 knots, 3.62 nautical miles	.90 hours
6 knots, 3.62 nautical miles	.60 hours
Savings at higher speed	.30 hours
Minutes in an hour	x60 minutes
One-way savings	18 minutes
5 knots, 3.62 nautical miles	.72 hours
7 knots, 3.62 nautical miles	.51 hours
Savings at higher speed	.21 hours
Minutes in an hour	x60 minutes
One-way savings	13 minutes

Total short-distance savings 18 + 13 = 31 minutes or .517 hours

Long-distance:

4 knots, 4.94 nautical miles	1.24 hours
6 knots, 4.94 nautical miles	.82 hours
Savings at higher speed	.42 hours
Minutes in an hour	x60 minutes
One-way savings	25 minutes
5 knots, 4.94 nautical miles	.99 hours
7 knots, 4.94 nautical miles	.71 hours
Savings at higher speed	.28 hours
Minutes in an hour	x60
One-way savings	17 minutes

Total long-distance savings 25 + 17 = 42 minutes or .70 hours

TABLE F-3

CALCULATION OF TANKER FLEET AND SAVINGS

SAVANNAH HARBOR WIDENING STUDY

1975 - 2030

Year	15,000 DWT 0 - 26' Draft	22,500 DWT 26 - 32.5' Draft	31,000 DWT 32.5 - 36' Draft	41,000 DWT 36 - 38' Draft	55,000 DWT 38' and Up Draft	TOTAL	Wtd. Average DWT	Deep Draft Tonnage	Percent Entering 400' Harbor 1/	Total Affected Tons	Average Tons Per Ship	No. of Affected Ships
1975	6%	59%	28%	7%	0%	100%	25500	4080200	86%	3508972	16096	218
							(1.06)				(1.06)	
1980	5%	54%	29%	10%	2%	100%	27000	5153700	86%	4432182	17062	260
							(1.07)				(1.07)	
1990	3%	48%	29%	15%	5%	100%	29000	6955100	86%	5981386	18236	328
							(1.10)				(1.10)	
2000	1%	40%	27%	22%	10%	100%	32000	7018900	86%	6036254	20082	300
							(1.13)				(1.13)	
2010	0%	25%	25%	35%	15%	100%	36000	7090100	86%	6097486	22693	269
							(1.07)				(1.07)	
2020	0%	15%	25%	40%	20%	100%	38500	7180800	86%	6175488	24282	254
							(1.05)				(1.05)	
2030	0%	10%	20%	45%	25%	100%	40500	7295600	86%	6274216	25496	246
Op. Cost/Hr at Sea (All Foreign Ships)	$ 370	$ 505	$ 555	$ 615	$ 700							

Year		No. of Vessels	No. of Vessels 2/	No. of Vessels	No. of Vessels	No. of Vessels	Total Affected Vessels	Composite Cost X	Time Saved =	Savings Per Vessel X	No. of Vessels =	TOTAL VESSEL SAVINGS	No. of Tugs Per Vessel X	Tug Costs Per Trip* X	No. of Vessels =	TOTAL TUG SAVINGS	Vessel and Tug Savings	TOTAL SAVINGS
1975	Long Distance	—	34	61	15	0	110	$ 548	.70	$ 384	110	$ 42,240	2.0	$ 70.00	110	$ 15,400	$ 57,640	$ 93,339
	Short Distance	13	95	—	—	-	108	489	.517	$ 253	108	27,324	1.5	$ 51.70	108	8,375	35,699	
1980	Long Distance	—	37	76	26	5	143	558	.70	$ 391	143	55,913	2.0	$ 70.00	143	20,160	76,464	114,807
	Short Distance	13	103	—	—	-	117	490	.517	$ 253	117	29,601	1.5	$ 51.70	117	8,996	38,344	
1990	Long Distance	—	41	95	49	17	202	572	.70	$ 400	202	80,800	2.0	$ 70.00	202	28,280	109,080	150,981
	Short Distance	10	116	—	—	-	126	494	.517	$ 255	126	32,130	1.5	$ 51.70	126	9,771	41,901	
2000	Long Distance	—	31	81	66	30	208	588	.70	$ 412	208	85,696	2.0	$ 70.00	208	29,120	114,816	145,779
	Short Distance	3	89	—	—	-	92	501	.517	$ 259	92	23,828	1.5	$ 51.70	92	7,135	30,963	
2010	Long Distance	—	17	67	94	41	219	604	.70	$ 423	219	92,637	2.0	$ 70.00	219	30,660	123,297	140,225
	Short Distance	—	50	—	—	-	50	505	.517	261	50	13,050	1.5	51.70	50	3,878	16,928	
2020	Long Distance	—	10	63	102	51	226	613	.70	$ 429	226	96,954	2.0	$ 70.00	226	31,640	128,594	138,073
	Short Distance	—	28	—	—	-	28	505	.517	261	28	7,308	1.5	51.70	28	2,171	9,479	
2030	Long Distance	—	6	49	111	61	227	622	.70	$ 435	227	98,745	2.0	$ 70.00	227	31,780	130,525	136,957
	Short Distance	—	19	—	—	-	19	505	.517	261	19	4,959	1.5	51.70	19	1,473	6,432	

1/ 86% of Tankers enter the narrow portion of Savannah Harbor

2/ Vessels in this size category turn at Marsh Island or Kings Island as a function of docking locations.

* at $100 per hour

T A B L E   F-4

CALCULATION OF DRY BULK FLEET AND SAVINGS

SAVANNAH HARBOR WIDENING STUDY

1975 - 2030

Year	15,000 DWT 0 - 26' Draft	22,500 DWT 26 - 32.5' Draft	31,000 DWT 32.5 - 36' Draft	41,000 DWT 36 - 38' Draft	55,000 DWT 38' and Up Draft	TOTAL	Wtd. Average DWT	Deep Draft Tonnage	Percent Entering 400' Harbor 1/	Total Affected Tons	Average Tons Per Ship	No. of Affected Ships
1975	3%	37%	34%	23%	3%	100%	30500 (1.03)	1619400	89%	1441266	12319 (1.03)	117
1980	3%	33%	34%	26%	4%	100%	31500 (1.03)	2678600	89%	2205954	12689 (1.03)	174
1990	2%	30%	32%	30%	6%	100%	32500 (1.06)	3380700	89%	3008823	13070 (1.06)	230
2000	1%	25%	32%	32%	10%	100%	34500 (1.03)	4484700	89%	3991383	13854 (1.03)	288
2010	0%	22%	32%	34%	12%	100%	35500 (1.04)	5802000	89%	5163780	14270 (1.04)	362
2020	0%	18%	29%	37%	16%	100%	37000 (1.04)	7526800	89%	6698852	14841 (1.04)	451
2030	0%	15%	25%	40%	20%	100%	38500	9795900	89%	8718351	15435	565

Year		No. of Vessels	No. of 2/ Vessels	No. of Vessels	No. of Vessels	No. of Vessels	Total Affected Vessels	Composite Cost X	Time Saved =	Savings Per Vessel X	No. of Vessels =	TOTAL VESSEL SAVINGS	No. of Tugs Per Vessel X	Tug Costs Per Trip* X	No. of Vessels =	TOTAL TUG SAVINGS	Vessel and Tug Savings	TOTAL SAVINGS
Op. Cost/Hr at Sea (All Foreign Ships)		$ 370	$ 503	$ 555	$ 615	$ 700												
1975	Long Distance	—	28	60	27	3	98	$ 562	.70	$ 393	98	$ 38,514	2.0	$ 70.00	98	$ 13,720	$ 52,234	$ 58,400
	Short Distance	4	15	—	--	-	19	477	.517	$ 247	19	4,693	1.5	$ 51.70	19	1,473	6,166	
1980	Long Distance	—	38	60	45	7	150	567	.70	$ 397	150	59,550	2.0	$ 70.00	150	21,000	80,550	88,339
	Short Distance	5	19	—	—	-	24	477	.517	$ 247	24	5,928	1.5	$ 51.70	24	1,861	7,789	
1990	Long Distance	—	46	73	69	14	202	574	.70	$ 402	202	81,204	2.0	$ 70.00	202	28,280	109,484	118,627
	Short Distance	5	23	—	—	-	28	481	.517	$ 249	28	6,972	1.5	$ 51.70	28	2,171	9,143	
2000	Long Distance	—	48	92	92	29	261	583	.70	$ 408	261	106,488	2.0	$ 70.00	261	36,540	143,028	151,953
	Short Distance	3	24	—	—	-	27	490	.517	$ 253	27	6,831	1.5	$ 51.70	27	2,094	8,925	
2010	Long Distance	—	53	116	123	43	335	588	.70	$ 412	335	138,020	2.0	$ 70.00	335	46,900	184,920	194,061
	Short Distance	—	27	—	—	-	27	505	.517	261	27	7,047	1.5	$ 51.70	27	2,094	9,141	
2020	Long Distance	—	53	131	167	72	423	597	.70	$ 418	423	176,814	2.0	$ 70.00	423	59,220	236,034	245,513
	Short Distance	—	28	—	--	-	28	505	.517	261	28	7,308	1.5	$ 51.70	28	2,171	9,479	
2030	Long Distance	--	56	141	226	113	536	606	.70	$ 424	536	227,264	2.0	$ 70.00	536	75,040	302,304	312,121
	Short Distance	—	29	--	--	-	29	505	.517	261	29	7,569	1.5	$ 51.70	29	2,248	9,817	

* at $100 Per Hour

1/ 89% of Dry Bulk Ships enter the narrow portion of Savannah Harbor

2/ Vessels in this size category turn at Marsh Island or Kings Island as a function of docking locations.

TABLE F-5

CALCULATION OF GENERAL CARGO VESSELS, INCLUDING CONTAINERSHIPS & "SPECIAL CARGO", AND SAVINGS

SAVANNAH HARBOR WIDENING STUDY

1975 - 2030

Year	8,750 DWT 0 - 26' Draft	14,600 DWT 26 - 32.5' Draft	26,300 DWT 32.5 - 36' Draft	35,000 DWT 36 - 38' Draft	48,500 DWT 38' and Up Draft	TOTAL	Wtd. Average DWT	Deep Draft Tonnage	Percent Entering 400' Harbor [1/]	Total Affected Tons	Average Tons Per Ship	No. of Affected Ships
1975	35%	54%	9%	2%	--	100%	14000	1266900	98%	1241562	1288	964
1980	30%	52%	11%	5%	2%	100%	15800	2251900	98%	2206862	2436	906
1990	25%	49%	16%	7%	3%	100%	17500	3441600	98%	3372768	3449	978
2000	20%	45%	20%	10%	5%	100%	19500	5194100	98%	5090218	4549	1119
2010	15%	40%	22%	17%	6%	100%	21800	6752800	98%	6617744	5483	1207
2020	10%	35%	24%	23%	8%	100%	24200	8989100	98%	8809318	6535	1348
2030	5%	30%	25%	30%	10%	100%	26700	11791000	98%	11555180	7678	1505
Op. Cost/Hr at Sea (All Foreign Ships)	$ 300	$ 590	$1234	$1500	$ 1733							

Year		No. of Vessels	No. of Vessels [2/]	No. of Vessels	No. of Vessels	No. of Vessels	Total Affected Vessels	Composite Cost X	Time Saved =	Savings Per Vessel X	No. of Vessels =	TOTAL VESSEL SAVINGS	No. of Tugs Per Vessel X	Tug Costs Per Trip* X	No. of Vessels =	TOTAL TUG SAVINGS	Vessel and Tug Savings	TOTAL SAVINGS
1975	Long Distance	--	297	87	19	--	403	$ 772	.70	$ 540	403	$ 217,620	2.0	$ 70.00	403	$ 56,420	$ 274,040	$ 438,161
	Short Distance	337	224	--	--	--	561	416	.517	$ 215	561	120,615	1.5	$ 51.70	561	43,506	164,121	
1980	Long Distance	--	268	100	45	18	431	882	.70	$ 617	431	265,927	2.0	$ 70.00	431	60,340	326,267	467,128
	Short Distance	272	203	--	--	--	475	424	.517	$ 219	475	104,025	1.5	$ 51.70	475	36,836	140,861	
1990	Long Distance	--	273	157	68	29	527	962	.70	$ 673	527	354,671	2.0	$ 70.00	527	73,780	428,451	563,999
	Short Distance	245	206	--	--	--	451	432	.517	$ 223	451	100,573	1.5	$ 51.70	451	34,975	135,548	
2000	Long Distance	--	287	224	112	56	679	1047	.70	$ 733	679	497,707	2.0	$ 70.00	679	95,060	592,767	727,649
	Short Distance	224	216	--	--	--	440	442	.517	$ 229	440	100,760	1.5	$ 51.70	440	34,122	134,882	
2010	Long Distance	--	275	266	205	72	818	1128	.70	$ 790	818	646,220	2.0	$ 70.00	818	114,520	760,740	882,322
	Short Distance	181	208	--	--	--	389	455	.517	$ 235	389	91,415	1.5	$ 51.70	389	30,167	121,582	
2020	Long Distance	--	269	323	310	108	1010	1197	.70	$ 838	1010	846,380	2.0	$ 70.00	1010	141,400	987,780	1,096,802
	Short Distance	135	203	--	--	--	338	474	.517	$ 245	338	82,810	1.5	$ 51.70	338	26,212	109,022	
2030	Long Distance	--	258	376	452	150	1236	1257	.70	$ 880	1236	1,087,680	2.0	$ 70.00	1236	173,040	1,260,720	1,352,328
	Short Distance	75	194	--	--	--	269	509	.517	$ 263	269	70,747	1.5	$ 51.70	269	20,861	91,608	

1/ 98% of General Cargo Vessels enter the narrow portion of Savannah Harbor

2/ Vessels in this size category turn at Marsh Island or Kings Island as a function of docking locations.

* at $100 per hour

20. As indicated in Table F-6, navigation benefits from the existing (1980) need for widening in Savannah Harbor are calculated at $670,000. Future potential benefits from widening, discounted at 6-3/8 percent in ten-year increments, are calculated to be an average annual equivalent of $262,000. Total average annual transportation benefits are estimated to be $932,000.

TABLE F-6

POTENTIAL TRANSPORTATION BENEFITS BY VESSEL TYPE
VESSELS AFFECTED BY WIDENING
1975 through 2030

	TANKERS	DRY BULK	GENERAL CARGO	TOTAL TRANSPORTATION BENEFITS
1975	$ 93,339	$58,400	$438,161	$589,900
1980	114,607	88,339	467,128	670,074
1990	150,981	118,627	563,999	833,607
2000	145,779	151,953	727,649	1,025,381
2010	140,225	194,061	882,332	1,216,608
2020	138,073	245,513	1,096,802	1,480,388
2030	136,957	312,121	1,352,328	1,801,406

Source: See text.

21. The widening of the Savannah Harbor Channel to 500 feet from Fig Island Turning Basin to Kings Island Turning Basin will require the dredging of approximately 2,950,000 cubic yards of material. Since this is new work, it is anticipated that the dredging will be more difficult than harbor maintenance work and will take approximately 12 months to complete the construction of the project.

22. The contractor hired to widen the channel will bring with him all of the labor needed to construct the project with the exception of 20 percent of the unskilled labor which would be hired locally. It is estimated these local hires would come from surrounding counties within a 50-mile radius of the project. There are eight counties so located which are designated as Redevelopment Counties under Section 401 (a) of Public Law 89-136. These counties are: Bryan, Effingham, Evans, Long, McIntosh, and Screven in Georgia and Hampton and Jasper in South Carolina. The labor pool for these redevelopment counties are shown in Table F-7.

23. Six laborers or 20 percent of the unskilled members of the dredge crew would be hired locally. The wages earned by these hires from the redevelopment areas would be considered redevelopment benefits. See Table F-8 for a breakdown of the dredge personnel required and their respective wages.

TABLE F-7
LOCAL LABOR POOL JAN. 1976 - EDA QUALIFIED COUNTIES WITHIN REASONABLE COMMUTING DISTANCE OF PROJECT

County	Total 1/ unemployed	Craftsmen, foremen 2/	Operatives 2/ incl. transportation	Laborers 2/ excl. farm	Others 3/
Georgia					
Bryan	221	26	62	0	133
Effingham	568	78	124	86	280
Evans	249	0	0	83	166
Long	133	18	13	0	102
McIntosh	199	6	17	43	133
Screven	309	41	90	10	168
South Carolina					
Hampton	720	99	160	108	353
Jasper	1,080	150	235	160	535
Total	3,479	418	701	490	1,870

1/ Male and female.

2/ Male.

3/ Includes occupations other than craftsmen, operatives, and laborers for males plus all occupations for females.

Source: The Georgia Department of Labor, Savannah, Ga.

TABLE F-8
DETAILED LABOR DATA FOR DREDGES
(24" & 27" DREDGE)

Type 1/ employee	Title	Tot. No. 24"	Tot. No. 27"	Sept. 74 wage rate (hr)	Hours per day	Total wages/day 24"	Total wages/day 27"
S	Captain	1	1	$12.50	8	$100.00	$100.00
S	Chief Engineer	1	1	12.50	8	100.00	100.00
S	Office Personnel	2	2	7.10	8	113.64	113.64
S	Leverman	4	4	6.52	8	208.64	208.64
S	Watch Engineer	3	3	6.52	8	156.48	156.48
S	Dredge Mate	3	3	5.73	8	137.52	137.52
S	Tug Master	2	2	5.67	8	90.72	90.72
S	Tug Mate	3	3	5.35	8	128.40	128.40
S	Equip. Operator	6	7	5.96	8	286.08	333.76
S	Welder	3	3	5.96	8	143.04	143.04
S	Steward	1	1	5.35	8	42.80	42.80
S	Gen. Dump Foreman	1	1	6.19	8	49.52	49.52
SS	Dump Foreman	3	3	5.51	8	132.24	132.24
SS	Oiler	4	4	4.58	8	146.56	146.56
U	Deckhand	14	16	4.19	8	469.28	536.32
U	Mess Attendant	3	3	4.19	8	100.56	100.56
U	Yard & Shoremen	10	12	4.08	8	335.20	402.24
	TOTAL	64	69			$2,740.68	$2,922.44

1/ S - Skilled
SS - Semi-skilled
U - Unskilled

Source: Monthly Operation Cost for Basic Hydraulic Dredging Plant.

24. The laborers hired locally would consist of 4 unskilled workers at $4.19 per hour and 2 at $4.08 per hour. The wages for the six unskilled laborers at the established rates would be $199.36 per day. The total redevelopment benefits attributable to the locally hired workers during the one-year construction period would be $72,766. These total redevelopment benefits discounted at 6-3/8 percent for a 50-year period ($72,766 X .066789) give an average annual redevelopment benefit of $4,900.

NHANCEMENT

25. Placement of dredge disposal material on the two areas on Hutchinson Island and on Area C should enhance the value of the lands for industrial purposes. Practically all of the 309 acres of disposal area needed for the project are at an average elevation of about 8.5 feet m.s.l. The 100-year hurricane surge, along the city front, is 10.5 feet m.s.l. Based on this, there would be some enhancement attributable to the project. The average value of the land is $9,500 per acre. The average value of high industrial land is about $12,000 per acre. Therefore, it is estimated that the value of the 309 acres will increase $2,500 per acre on an average, thus giving a total enhancement value of $773,000. The cost of fill required to raise this area from an average of 8.5 feet m.s.l. to 11 feet m.s.l. is $1,246,000. In accordance with EM 1120-2-101, the lesser of these two values is used to compute enhancement benefits and associated cost-sharing information. The total enhancement value of $773,000 would have an annual value of $49,000.

SUMMARY OF BENEFITS

26. Table F-9 provides a summary of the average annual benefits.

TABLE F-9
SUMMARY OF BENEFITS

Item		Amount
Transportation Savings		$ 932,000
Existing (1980)	$ 670,000	
Future	262,000	
Redevelopment		5,000
Enhancement		49,000
Total Annual Benefits		$ 986,000

27. The proposed improvement would stimulate industrial growth of the area by reducing the shipping transportation costs. The most significant regional effects would relate to this aspect of the improvement. As previously discussed, much of the regional economy is dependent on the port facilities. Lower in-port vessel operating costs will permit the harbor complex to expand and more efficiently accommodate its waterborne commerce tonnages. New industries and their related waterborne commerce requirements will generate employment, wages, salaries, profits, and tax revenues for the entire region as well as areas outside of the immediate region. The proposed project would allow for more efficient operation of those vessels presently calling at the port.

28. The estimated annual charges, the estimated annual benefits, and the ratio of benefits-to-charges, which are summarized in table F-10, indicate that the recommended plan to widen the navigation channel between Fig Island Turning Basin and Kings Island Turning Basin from 400 to 500 feet is economically justified.

TABLE F-10
SUMMARY OF ECONOMIC ANALYSIS
RECOMMENDED PLAN

Feature	Amount Existing(1980)	 Future	 Total
Average Annual Benefits	$724,000	$262,000	$986,000
Annual Charges	691,000	--	691,000
Economic Ratio (Benefit/Cost)	1.05	--	1.43

SECTION G
Division of Plan Responsibilities

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Division of Plan Responsibilities

1. The purpose of this section is to present pertinent information regard-cost allocation and cost apportionment between Federal and non-Federal interests. A summary of the overall Federal and non-Federal responsibilities for the plan will also be presented.

COST ALLOCATION

2. It has been determined that the placement of dredged material on the proposed disposal areas would enhance the land for industrial purposes; therefore, a portion of the costs of dredging the general navigation channel would be allocated to enhancement.

TABLE G-1
SAVANNAH HARBOR, GEORGIA
ALLOCATION OF DREDGING COSTS

	Transportation and Redevelopment	Land Enhancement	Total
Benefit distribution	$937,000	$49,000	$986,000
Distribution percentage	95.0	5.0	100
Dredging cost distribution	$6,309,000	$332,000	$6,641,000

COST APPORTIONMENT

3. All costs will be apportioned between Federal and non-Federal interests according to current policies and guidelines established for general navigation projects. Local interests will be required to provide all lands, disposal area retaining structures, rights-of-way, alterations of powerlines required for construction and maintenance of the improvement, comparable depths in berthing areas and access channels, and to contribute in cash

toward construction of the project, based upon the proportionate share of general and local benefits. All costs for dredging of the general navigation improvements except those allocated to land enhancement will be borne by the Federal Government. All navigation aids and maintenance costs will be a Federal responsibility.

TABLE G-2
SAVANNAH HARBOR, GEORGIA
APPORTIONMENT OF COSTS

Item	FEDERAL	Non-Federal	Total
First Costs			
Dredging	$6,475,000	$166,000	$6,641,000
Navigation aids	20,000	--	20,000
Relocations	--	123,000	123,000
Clearing and removal	151,000	--	151,000
Lands and damages	--	2,894,000	2,894,000
Disposal areas	--	516,000	516,000
Total first costs	$6,646,000	$3,699,000	$10,345,000

FEDERAL RESPONSIBILITIES

4. After Congressional authorization and funding, the United States will design and prepare detailed plans for the authorized project. After receipt of required non-Federal share of the construction costs, the United States will then dredge and maintain the navigation channels and provide and maintain the necessary aids to navigation at an estimated cost of $6,646,000.

NON-FEDERAL RESPONSIBILITIES

5. Non-Federal interests must fulfill the following responsibilities:

a. Convey without cost to the United States all lands, easements, and rights-of-way necessary for the construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of spoil and including necessary retaining dikes, waste weirs, bulkheads, and embankments therefore, or the costs of such retaining works, all at a presently estimated cost of $3,410,000.

b. Accomplish without cost to the United States all alterations and relocations of buildings, transportation facilities (excluding railroad, combined highway and railroad, and publicly owned highway bridges and approaches thereto), storm drains, utilities, and other structures and improvements made necessary by the construction at a presently estimated cost of $123,000.

c. Fulfill the requirements of non-Federal cooperation as specified in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) approved 2 January 1971.

d. Provide a cash contribution for the general navigation facilities equal to 50 percent of the final construction cost allocated to land enhancement resulting from landfill exclusive of lands, easements, rights-of-way, alterations, and relocations presently estimated at $166,000.

e. Hold and save the United States free from damages due to the construction works other than damages due to the fault or negligence of the United States or its contractors.

f. Provide and maintain without cost to the United States adequate public terminal and transfer facilities open to all on equal terms.

g. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the terminals commensurate with the depths provided in the related project areas.

h. Prohibit the erection of any structures within 125 feet of the bottom edge of the proposed channel widening.

6. Chatham County serves as local assurer for the current project and they have presented a letter (see appendix 2) stating their intent to fulfill the requirements of local cooperation for the proposed project. Chatham County is a public body capable of meeting the requirements of Section 221 of Public Law 91-611.

SAVANNAH HARBOR
GEORGIA
FEASIBILITY REPORT
FOR
HARBOR WIDENING

APPENDIX 2

Pertinent Correspondence

PREPARED BY THE
SAVANNAH DISTRICT, CORPS OF ENGINEERS
DEPARTMENT OF THE ARMY

Pertinent Correspondence

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J TOM COLEMAN JR
CHAIRMAN

L. SCOTT STELL, JR
VICE CHAIRMAN

COMMISSIONERS of CHATHAM COUNTY

P O BOX 8161
SAVANNAH, GEORGIA 31402

COMMISSIONERS
WILLIE E BROWN
FRANK O DOWNING
CLEVE FOUNTAIN
WALTER W MATTHEWS
ROBERT L McCORKLE
JOHN LYNCH NUGENT
ALBERT A SADLER

J E LAMBRIGHT
COUNTY ADMINISTRATOR
ANTON F SOLMS JR
COUNTY ATTORNEY

August 16, 1976

Colonel Frank Walter
District Engineer
U.S. Army Engineer District, Savannah
Post Office Box 889
Savannah, Georgia 31402

Dear Colonel Walter:

It is the intention of the Chatham County Commissioners, acting on behalf of Chatham County, Georgia, to cooperate with the Corps of Engineers and fulfill the requirements of local cooperation for the proposed Savannah Harbor widening modification, as follows:

a. Convey without cost to the United States all lands, easements, and rights-of-way necessary for the construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers to be required in the general public interest for initial and subsequent disposal of spoil and including necessary retaining dikes, wasteweirs, bulkheads, and embankments therefor, or the costs of such retaining works.

b. Accomplish without cost to the United States all alterations and relocations of buildings, transportation facilities (excluding railroad, combined highway and railroad, and publicly owned highway bridges and approaches thereto), storm drains, utilities, and other structures and improvements made necessary by the construction.

c. Fulfill the requirements of non-Federal cooperation as specified in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) approved 2 January 1971.

d. Provide a cash contribution for the general navigation facilities equal to 50 percent of the final construction cost allocated to land enhancement resulting from landfill exclusive of lands, easements, rights-of-way, alterations, and relocations.

e. Hold and save the United States free from damages due to the construction works other than damages due to the fault or negligence of the United States or its contractors.

f. Provide and maintain without cost to the United States adequate public terminals and transfer facilities open to all on equal terms.

g. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving the public terminals commensurate with the depths provided in the related project areas.

h. Prohibit the erection of any structures within 125 feet of the bottom edge of the improved channel widening.

Sincerely,

J. Tom Coleman Jr.

J. Tom Coleman, Jr.

JTC,jr:mrg

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (oan)
Seventh Coast Guard District
Room 1012 Federal Building
51 SW. 1st Avenue
Miami, Fla. 33130
(305) 350-5621

3260
Serial: 1758
5 May 1976

From: Commander, Seventh Coast Guard District
To: District Engineer, U. S. Army Corps of Engineers, Savannah, GA

Subj: Savannah Harbor Widening Study

Ref: (a) Your letter SASPD-P dated 9 April 1976

1. Reference (a) has been reviewed. There is no question but that the widening will improve the safety of navigation both in the river, and through the Eugene Talmadge Memorial Bridge. It does appear impractical to widen the channel any more on the east, due to the proximity of the bridge piers. The "protection" of the easterly pier by shallow water is a good feature of the designed widening.

2. While it may not be possible to widen the entire channel, we would like to explore the possibility of a 50 foot widening within about 500 feet of the bridge, on the west side of the channel. This would preserve the full width through the bridge, even though a slight dogleg would result from this dredging. If this is also impractical, we will require the bridge lights to be realigned to indicate the new center of the channel, and the new eastward boundary.

W. J. Brogdon

W. J. BROGDON, JR.
By direction

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASPD-P

9 April 1976

SUBJECT: Savannah Harbor Widening Study

Commander
Seventh Coast Guard District
1203 Federal Building
51 SW. First Avenue
Miami, FL 33130

1. The Savannah District is currently finalizing a navigation study of the Savannah Harbor to determine the feasibility of widening the existing navigation channel from the Fig Island turning basin to the Kings Island turning basin, a distance of about 6 miles. Our studies indicate that it is desirable to widen this reach by 100 feet (from 400 feet to 500 feet).

2. The proposed plan calls for the widening to be accomplished entirely along the Hutchinson Island side (north side) of the channel. The location of the piers and fender system on the Talmadge Bridge (U.S. 17A), indicates that the channel widening through the bridge should be limited to about 50 feet. Although the total bridge opening is sufficient to allow the total widening, it is not possible to shift the centerline of the proposed new channel to the centerline of the bridge opening. Limiting the channel widening to 50 feet in lieu of 100 feet through the bridge would reduce the vulnerability of the north pier to damage from a direct collision by a vessel.

3. It is requested that an analysis of the proposed widening be made with respect to the existing bridge opening. Does the narrowing of the channel through the bridge create a problem when viewed relative to the proposed alignment on each side of the bridge? It is also requested that any available survey data on the existing bridge be furnished to this office. Your views are desired at the earliest practicable date.

4. Inclosed is a drawing taken from the 1975 annual survey showing the proposed widening in the vicinity of the Talmadge Bridge.

FOR THE DISTRICT ENGINEER:

FREEMAN G. CROSS, JR.
LTC, Corps of Engineers
Deputy District Engineer

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER oan
Seventh Coast Guard District
Room 1018, Federal Building
51 SW. 1st Avenue
Miami, Fla. 33130

3260
Serial: 1261
13 February 1974

From: Commander, Seventh Coast Guard District
To: District Engineer, U.S. Army Corps of Engineers, Savannah Harbor, Savannah, Ga.

Subj: Savannah Harbor; considered modifications

Ref: (a) Your ltr SASNG of 24 January 1974

1. Modifications as proposed are compatible with the interests of the Coast Guard.

2. No objections.

R E Nielsen
R. E. NIELSEN
By direction

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASNG

24 January 1974

SUBJECT: Considered Savannah Harbor Modifications

Commander (oan)
Seventh Coast Guard District
Federal Building, Room 1018
51 S.W. First Avenue
Miami, FL 33130

1. Pursuant to a resolution by the Committee on Public Works of the House of Representatives, United States, dated 10 July 1968, the Savannah District is making a navigation study of the Savannah Harbor with general reference to widening the harbor between the present upstream limit of the 500-foot channel (adjacent to Fig Island turning basin) and the Kings Island turning basin.

2. Our preliminary findings to date indicate that there is a need to widen this reach of the channel from 400 feet to 500 feet in order to accommodate the new generation of vessels presently using and planning to use the Port of Savannah. Furthermore, our studies indicate that harbor modification under study has merit and warrants further consideration.

3. Inclosed for your information is a general map depicting the location and scope of the considered harbor improvement. Also inclosed for your information is an aerial map for the channel reach between the Fig Island turning basin and the site of the former Seaboard Coast Line Railroad Bridge which shows the magnitude of the relocations that would be involved on Hutchinson Island. There are no improvements on Hutchinson Island upstream of this site which would be involved in the channel widening under consideration.

4. Our environmental impact assessment indicates that there would be no significant adverse environmental impact resulting from the harbor modification under study. At the appropriate time in our study schedule, an environmental impact statement will be coordinated with all interested parties as required by law. In reference to the modification under consideration, all dredged material would be disposed of in accordance with the approved dredged material disposal plan for maintenance of the Savannah Harbor project as coordinated with State and Federal agencies.

5. It is requested that modifications tentatively proposed be reviewed for compatibility with the interests of your agency and that your comments be furnished as soon as possible, as we are attempting to complete this study at an early date.

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Duval Building
9450 Gandy Boulevard
St. Petersburg, FL 33702

November 17, 1975

FSE21/AM

Colonel Edwin C. Keiser
District Engineer, Savannah District
Department of the Army, Corps of Engineers
P.O. Box 889
Savannah, GA 31402

Dear Colonel Keiser:

Please reference your October 16, 1975, letter pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

While we have no specific comments at this time, we feel the Draft DEIS should include the following:

1. a description of the area proposed for dredging, including the existing benthos and preproject depths;

2. documentation for the assumption that "recolonization of the disturbed area would occur a short time following completion of construction;"

3. a discussion of the biota associated with the project area and the degree to which the biota will be effected by construction; and

4. a complete description of the disposal areas; including dike cross sections. locations of spillways and the vegetation associated with each area.

We appreciate the opportunity to provide our comments and look forward to review of the Draft Environmental Impact Statement.

Sincerely,

William H. Stevenson
Regional Director

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASPG

16 October 1975

Regional Director
National Marine Fisheries Service
U.S. Department of Commerce
9450 Gandy Blvd.
St. Petersburg, FL 33702

Dear Sir:

Reference is made to our letter of 24 January 1974 which requested the National Marine Fisheries Service's comments pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some-short-term disruptions to the environment by implementation of the proposed project. They would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any additional preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

Copies of the draft feasibility report and preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

GEORGIA DEPARTMENT OF COMM[illegible]ITY DEVELOPMENT

(404) 656-3526

November 7, 1975

Colonel Edwin C. Keiser
District Engineer
Corps of Engineers
Department of the Army
Post Office Box 889
Savannah, Georgia 31402

Dear Col. Keiser:

This letter is a reply to your letter of October 16th about your tentative proposal for widening Savannah Harbor.

General Truman is in the Far East on a Trade Mission and in his absence I have taken the liberty to respond to your letter.

The Bureau of Industry and Trade has no specific comments to make on this proposal at the present time, except to say that we encourage the orderly development of all port facilities in Georgia, and we believe that this Harbor improvement will assist in the further development of the port of Savannah.

We shall look forward to receiving the preliminary draft Environmental Impact Statement when it is available.

Sincerely,

James O. Bohanan

James O. Bohanan
Assistant Deputy Commissioner
Bureau of Industry and Trade

JOB:js

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASHG

16 October 1975

Lt. Gen. Louis W. Truman, USA Retired
Commissioner, Georgia Department of
Community Development
P. O. Box 38097
Atlanta, GA 30334

Dear General Truman:

Reference is made to our letter of 24 January 1974 which requested Georgia Department of Community Development's comments pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions to the environment by implementation of the proposed project. They would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

A copy of the preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

October 28, 1975

Colonel Edwin C. Keiser
District Engineer
U. S. Army, Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Re: SASNG Widening of Savannah Harbor
between Fig Island Turning Basin
and Kings Island Turning Basin

Dear Colonel Keiser:

This is in response to your letter of October 16, 1975, covering the tentative proposal for widening of Savannah Harbor from the Fig Island Turning Basin to the Kings Island Turning Basin.

We have no particular objection to the structural features of the project as proposed since we realize that the tendency is for the use of the more efficient larger ships which require a greater draft and wider channels.

However, our concern for this project and other similar widening and deepening projects in Savannah Harbor lies in the large volume of spoil handled which greatly reduces the effective life of the existing spoil sites and places pressure on the filling additional adjacent marsh lands to satisfy harbor maintenance and construction needs.

Since the life of the existing spoil sites is limited, we believe that alternate methods of disposal should be thoroughly investigated. We believe that possible overall long-range solutions to the environmental problems associated with the maintenance and construction operations at Savannah Harbor lie in the disposal of dredged materials in the ocean either by developing dredging and hopper equipment which can provide efficient transportation of the materials to the ocean or by pumping through a pipeline to approved upland areas or the ocean disposal site.

Equipment which could concentrate the solids in the spoil at the site of the dredge would provide more efficient hopper transport since dredged material usually contains from 75 to 85 percent water. Also, the use of a fleet of self-propelled barges operating in conjunction with a conventional pipeline dredge modified to load barges should be thoroughly investigated.

We believe that the development of efficient equipment of this type is essential to solving the environmental problems associated with Savannah Harbor and other similar harbors.

Sincerely yours,

Arthur G. Linton, P. E.
Federal Activities Coordinator
Enforcement Division

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

16 October 1975

Mr. Arthur G. Linton, Chief
Federal Facilities Office
Enforcement Division
U.S. Environmental Protection Agency, Region IV
1421 Peachtree Street, NE
Atlanta, GA 30309

Dear Mr. Linton:

Reference is made to your letter of 11 February 1974 in which you commented on the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions to the environment by implementation of the proposed project. They would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any additional preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

SASVC
Mr. Arthur G. Linton

16 October 1975

Copies of the draft feasibility report and preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30309

February 11, 1974

District Engineer
U. S. Army, Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Re: SASNG Savannah Harbor Improvements
(Widening of Channel to 500 feet)

Dear Sir:

This is in reply to your letter of January 24, 1974, requesting our comments with regard to the widening of the Savannah Harbor Channel from 400 feet to 500 feet in the reach from the Fig Island Turning Basin to the Kings Island Turning Basin.

Although the dredging operations involving the 100 foot cut will have considerable short term effect on water quality in the area being dredged and immediately below this area, the long term effect on water quality in the Savannah River will not be significant. The greatest effect on the environment will be felt in the disposal of the several million cubic yards of material which will be removed from the south edge of Hutchinson Island. This material will occupy considerable space and in the past dredged materials from the Savannah Harbor Projects have either been disposed of on marsh or previously used spoil areas which were originally marsh areas. Since your letter indicates that the material will be disposed of in accordance with an approved disposal plan which will be outlined in an environmental impact statement, we will reserve our final appraisal of the project until the details of the disposal plan and the character of the sediments are known.

Sincerely yours,

Arthur G. Linton
Chief
Federal Facilities Office
Enforcement Division

NOTE:
Referenced letter shown
as Exhibit G.

United States Department of the Interior
NATIONAL PARK SERVICE
SOUTHEAST REGIONAL OFFICE
3401 WHIPPLE AVENUE
ATLANTA, GEORGIA 30344

IN REPLY REFER TO:
L7617-SER-PE

FEB 6 1974

Colonel Edwin C. Keiser
Department of the Army
Savannah District
Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Dear Colonel Keiser:

We were pleased to receive your request for preliminary comments on your proposal to widen the channel at Savannah Harbor from 400 to 500 feet.

This action will not adversely affect any existing, proposed, or known potential units of the National Park System or any known historic, natural or environmental education sites eligible or considered potentially eligible for the National Landmark Programs. However, you may wish to contact the State Historic Preservation Officer for Georgia, Mrs. Mary G. Jewett, Georgia Historical Commission, 116 Mitchell Street, S. W., Atlanta, Georgia 30303, concerning the effect of the project on any National Register sites or any sites that are potentially eligible for listing on the National Register of Historic Places.

We would further suggest that if previously unmodified upland sites are chosen for spoil deposit sites, an archeological survey be performed by a professional archeologist in order to determine whether there are cultural values located in the area; and if there are any, to provide sufficient time for an assessment and salvage of those values prior to spoil deposition. If in the process of widening the channel there are significant archeological finds such as ship wrecks relating to the early history of our country, provision should be made for assessment of their values prior to destruction, and in the rare instance that something might be found of high State or national significance, provisions be made to allow for salvage.

We will be pleased to review the environmental impact statement at the appropriate time.

Sincerely yours,

Robert G. Stanton

Robert G. Stanton
Acting Regional Director
Southeast Region

NOTE:
This letter in response
to letter shown in
Exhibit G.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASNG

16 October 1975

Mr. Kenneth E. Black, Regional Director
Fish and Wildlife Service
U.S. Department of the Interior
17 Executive Park Drive, NE
Atlanta, GA 30329

Dear Mr. Black:

Reference is made to our letter of 24 January 1974 which requested Fish and Wildlife Service's comments pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions to the environment by implementation of the proposed project. They would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any additional preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

Copies of the draft feasibility report and preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

NOTE: No response received.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASNG

16 October 1975

Mr. Charles M. Parrish, III
Director
Office of Planning and Research
Department of Natural Resources
Trinity-Washington Building
Room 707B
270 Washington Street, SW
Atlanta, GA 30334

Dear Mr. Parrish:

Reference is made to our letter of 24 January 1974 which requested the Department of Natural Resources' comments pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions to the environment by implementation of the proposed project. They would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any additional preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

Copies of the draft feasibility report and preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

NOTE: No response received.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASHG

16 October 1975

Father Bertrand Dunnegan, President
Ogeechee Chapter, Audubon Society
c/o Savannah Science Museum
4405 Paulsen Street
Savannah, GA 31405

Mr. Hans Neuhauser, Executive Director
Coastal Plains Chapter
Georgia Conservancy
c/o Savannah Science Museum
4405 Paulsen Street
Savannah, GA 31405

Dear

I am pleased to advise you that our widening study on Savannah Harbor is currently being finalized. We have formulated a plan of improvement which would consist of widening the navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. In addition, possible disposal areas have also been identified for the plan. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions of the environment by implementation of the proposed project. These disruptions would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed area would occur in a short time following completion of construction.

It is requested that any preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

A copy of the preliminary draft Environmental Impact Statement will be furnished to you at a later date for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

2 Incl
As stated

NOTE: No response received.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASNG

29 October 1975

Regional Administrator, Region IV
U.S. Department of Housing and Urban Development
1371 Peachtree Street, NE
Atlanta, GA 30309

Dear Sir:

Reference is made to our letter of 24 January 1974 which requested HUD's comments pertaining to the Savannah District's tentative proposal for widening of Savannah Harbor.

Since that time, a plan of improvement has been formulated and possible disposal areas have been identified. The proposed plan consists of widening the present navigation channel between Fig Island turning basin and Kings Island turning basin from 400 feet in width to 500 feet in width on the north side of the channel. Inclosed for your information is a general map of the harbor depicting the location and scope of the proposed recommended plan. Also included is a map showing the locations of the disposal areas for placement of dredged material associated with the proposed project.

Our environmental studies indicate that there would be some short-term disruptions of the environment by implementation of the proposed project. These disruptions would consist of such things as a temporary increase in turbidity of the water and suspended solids, loss of plankton, and destruction of benthic organisms by the dredging operation. However, recolonization of the disturbed areas would occur in a short time following completion of construction.

It is requested that any additional preliminary comments or information you may have concerning the proposed plan be furnished to us as soon as possible so that your views may be considered in the preparation of the draft feasibility report and preliminary draft Environmental Impact Statement.

Copies of the draft feasibility report and preliminary draft Environmental Impact Statement will be furnished to you at a later data for the necessary review and coordination.

Thank you for your early consideration of this matter.

Sincerely yours,

2 Incl
As stated

EDWIN C. KRISER
Colonel, Corps of Engineers
District Engineer

NOTE: No response received.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 889
SAVANNAH, GEORGIA 31402

SASNC

24 January 1974

SEE LIST ATTACHED FOR ADDRESSEES

Dear

Pursuant to a resolution by the Committee on Public Works of the House of Representatives, United States, dated 10 July 1968, the Savannah District is making a navigation study of the Savannah Harbor with general reference to widening the harbor between the present upstream limit of the 500-foot channel (adjacent to Fig Island turning basin) and the Kings Island turning basin.

Our preliminary findings to date indicate that there is a need to widen this reach of the channel from 400 feet to 500 feet in order to accommodate the new generation of vessels presently using and planning to use the Port of Savannah. Furthermore, our studies indicate that harbor modification under study has merit and warrants further consideration.

Inclosed for your information is a general map depicting the location and scope of the considered harbor improvement. Also inclosed for your information is an aerial map for the channel reach between the Fig Island turning basin and the site of the former Seaboard Coast Line Railroad Bridge which shows the magnitude of the relocations that would be involved on Hutchinson Island. There are no improvements on Hutchinson Island upstream of this site which would be involved in the channel widening under consideration.

Our environmental impact assessment indicates that there would be no significant adverse environmental impact resulting from the harbor modification under study. At the appropriate time in our study schedule, an environmental impact statement will be coordinated with all interested parties as required by law. In reference to the modification under consideration, all dredged material would be disposed of in accordance with the approved dredged material disposal plan for maintenance of the Savannah Harbor project as coordinated with State and Federal agencies.

It is requested that modifications tentatively proposed be reviewed for compatibility with the interests of your agency and that your comments be furnished as soon as possible, as we are attempting to complete this study at an early date.

Sincerely yours,

2 Incl
As stated

EDWIN C. KEISER
Colonel, Corps of Engineers
District Engineer

Letter of 24 January 1974 sent to following:

Regional Director NOTE:
Environmental Protection Agency, Region IV Response shown
1421 Peachtree Street, N.E. in Exhibit E.
Atlanta, GA 30309

Mr. C. Edward Carlson, Regional Director
Fish and Wildlife Service
U.S. Department of the Interior NOTE: No response received.
Peachtree-Seventh Building
Atlanta, GA 30323

Mr. Charles M. Parrish III
Director, Office of Planning and Research
Department of Natural Resources NOTE: No response
Trinity-Washington Building, Room 707B received.
270 Washington Street, S.W.
Atlanta, GA 30334

Regional Administrator, Region IV
U.S. Department of Housing and Urban Development
Peachtree-Seventh Building
50 Seventh Street, N.E. NOTE: No response received.
Atlanta, GA 30323

Mr. David D. Thompson
Regional Director, Southeast Region NOTE:
National Park Service Response shown
U.S. Department of the Interior in Exhibit F.
3401 Whipple Avenue
Atlanta, GA 30344

Mr. Jack U. Gehringer, Regional Director
Southeast Regional Office, Region 2
National Marine Fisheries Service, NOAA
U.S. Department of Commerce NOTE: No response received.
114 First Avenue, South
St. Petersburg, FL 33701

Lt. General Louis W. Truman
U.S. Army (Ret.)
Commissioner, Georgia Department of
Community Development
P. O. Box 38097 NOTE: No response received.
Atlanta, GA 30334

PHONE [illegible]

georgia ports authority
P. O. BOX 2406 SAVANNAH, GEORGIA 31402

May 26, 1976
Ref: 11-2710-76/

Colonel Frank Walter
District Engineer
Department of the Army
Savannah District
Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Dear Colonel Walter:

I am writing in reference to the public hearing being held May 27, 1976, pertaining to the widening of the channel in the Savannah Harbor.

The Georgia Ports Authority has consistently supported the widening of the channel in the Savannah Harbor from the vicinity of the Fig Island Turning Basin to the King's Island Turning Basin from 400 feet to 500 feet. A copy of my letter to Colonel E. C. Keiser dated April 12, 1974, supporting this improvement is attached.

The additional widening is a necessity if Savannah is to continue to accommodate the large, modern containerships and bulk carriers which are now restricted to one-way passage in this area. The widening must be accomplished at the earliest possible time.

The Georgia Ports Authority is now in the midst of an expansion program in Savannah consisting of over $50,000,000 in expenditures. Included in this program is a roll-on roll-off/container berth at our Container Central Complex. Also included is expansion of our Dry Bulk Handling Facility which will include storage space for grain type products. Both of these projects will open a new era of shipping in Savannah.

The complete rebuilding of our Ocean Terminal Berths 1 and 2 is now under way under this expansion program.

Safe and favorable harbor conditions must exist if the Georgia Ports Authority and the Port of Savannah are to continue to open new horizons for shipping and to continue to experience growth and prosperity.

We want also again to go on record as favoring the harbor improvements outlined in public meeting held by the Savannah District Engineer on December 12, 1973. A copy of my statement made at that hearing is attached.

Sincerely,

J. D. Holt

J. D. Holt
Executive Director

JDH:rb

Savannah Port Authority
Port & Industrial Development
42 East Bay Street • P.O. Box 128 • Savannah, Georgia 31402
Telephone (912) 233-9604 • Cable: SAVANAPORT

STATEMENT OF W. H. McGOWAN
EXECUTIVE DIRECTOR, SAVANNAH PORT AUTHORITY
PUBLIC MEETING ON SAVANNAH HARBOR WIDENING
MARCH 13, 1974

I am W. H. McGowan, Executive Director, Savannah Port Authority. I refer to the Public Hearing of June 25, 1970, on the subject of widening Savannah channels between the Seaboard Coast Line Terminal and the Seaboard Coast Line Bridge from 400' to 500'. In this hearing, General P. N. Strong, as a member of the Port Advisory Committee of the Savannah Port Authority, presented a statement on behalf of the Savannah Port Authority. The remarks made by General Strong then are substantially the same today and are in the record of that earlier hearing. A brief summary is made here with some additional comment in view of the passage of time. The June 25, 1970, hearing related generally to harbor improvement between the Railroad Terminal and the Railroad Bridge and in particular, widening from 400' to 500'. Subsequently, at the request of local interests, this study was extended by the Engineers to include the reach from the Railroad Bridge upstream to the King's Island Turning Basin.

In the Savannah Port Authority statement, it was pointed out that "in the past, steady and predictable changes in the pattern of ocean traffic enabled the sea ports to keep reasonably abreast of ocean traffic needs, but today, this is not true". This report commented on revolutionary changes in the methods of transporting goods across the ocean - the advent of the LASH and container ships and the marked changes in the size of tank ships. This statement further gave two basic reasons for the widening project. The first was for safety. It pointed out that the 400' width is entirely inadequate for the safe passage of vessels which enter the Harbor, some of which have beams in excess of 100'. The second reason was that studies which are underway may indicate that a 42' MLW depth channel will be needed by 1980 as contrasted with the present 38'. The report pointed out that "future deepening in a 400' wide channel could not be obtained without endangering structures on either side, and so the mid-section of the Harbor would forever prevent future improvement, unless it is first widened and then deepened. We are not asking for the deepening now - we are asking for a width that will serve traffic today and permit deepening tomorrow when the overall needs of the Harbor in 1980 are presented to the Corps of Engineers next year or sooner." (Long range planning has since been presented to the Corps of Engineers in a report by Thomas & Hutton, April 5, 1972, made in cooperation with the Savannah Port Authority and the Chatham County-Savannah Metropolitan Planning Commission.

READEX FICHE

In the hearing referred to, former Master Pilot Capt. J. V. Ryan and Chairman of the Special Port Committee of the Savannah Port Authority, pointed out that the most critical section of the City Front Channel extends from the Army Engineers' wharf on Hutchinson Island upstream to the Atlantic Cement Co.; the distance between opposing docks being about 600'; that the berthing of ships of varying types narrows the River considerably; that large ships try to avoid passing each other in the City Front Channel. This makes the River a one-way street. Vessel delays occur due to the necessity of holding vessels underway in the upper and lower Harbor while another vessel makes the City Front Passage. The Ryan report commented on the characteristics of modern vessels and their handling under conditions of wind and tide. It noted that two 700' vessels take 1400' to clear each other - at least a quarter of a mile and that under adverse weather conditions, much hazard can be incurred.

Indicative of the substantial increase in the size of ships are the Harbormaster's statistics which reflect that the net register tonnage of vessels calling at Savannah is steadily increasing (net register ton means space tonnage). In the year 1973, 1578 vessels called at Savannah with net register tonnage of 10,575,700 tons. This gives the average net register ton per vessel of 6701. This is an increase over 1960 of 91%. It is also an increase over the year 1970 in which the first hearing was held of 35%. The water borne commerce of the Port has been steadily increasing and as reported by the Corps of Engineers, 8,000,000 short tons were handled in 1972 compared with 6.8 million tons in 1970 and 4.3 million tons in 1960.

Examples of the larger ships calling at the Port are:

NAME	LENGTH	BEAM	TYPE
N.Y. Maru	862'11"	105'10"	Container
Tohbei Maru	806'11"	105' 1"	Container
Japanese Ambrose	748'	105'10"	Container
City Service, Miami	661'	90'5"	Tanker
Conqueror	634'	83' 3"	Tanker
Zen Koren Maru #3	682'	105'10"	
Amoco Delaware	634'	85'	Tanker

The Savannah Port Authority here expresses its continuing interest in this much needed Harbor improvement and urges its earliest accomplishment.

Thank you.

SAVANNAH PILOTS ASSOCIATION
WE SERVE THE PORT
DIESEL PILOT BOATS "M/V GEORGIA" AND "M/V SAVANNAH PILOT"
204 EAST BAY STREET • POST OFFICE BOX 9267
SAVANNAH, GEORGIA 31402

May 27, 1976

Department of the Army
Savannah District. Corps of Engineers
Post Office Box 889
Savannah, Georgia 31402

RE: PUBLIC MEETING ON SAVANNAH HARBOR WIDENING STUDY, 27th. MAY 1976.

COLONEL WALTERS, LADIES AND GENTLEMEN:

I AM WILLIAM T. BROWN, MASTER PILOT PORT OF SAVANNAH AND CHAIRMAN OF SPECIAL PORTS COMMITTEE, SAVANNAH PORTS AUTHORITY.

I WOULD LIKE TO EMPHASIZE THE EXTREME IMPORTANCE OF THIS MEETING AND THE TIMELY PLANNING THAT IS CONTAINED IN THE PROPOSED WIDENING OF THE EXISTING 400' CHANNELS TO 500', FROM THE FIG ISLAND TURNING BASIN TO KINGS ISLAND TURNING BASIN.

DURING THE PAST DECADE, THOSE OF US ENGAGED IN THE NAVIGATIONAL AND SHIP HANDLING PROCESS WITHIN THE CONFINES OF THE PORT HAVE SEEN SHIP SIZES DOUBLE. ECONOMICS HAVE CAUSED SHIPPERS TO CHANGE THE MAJOR METHOD OF SHIPPING TO CONTAINERIZATION OR LASH AND THE SHIPOWNER IN ORDER TO MAKE A PROFIT BUILD LARGER VESSELS TO ACCOMMODATE THE TRADES.

IN THE SELECTION OF PORTS OF CALL, THE OVERALL STUDIES MUST SHOW AND PROVIDE THAT THE LARGE VESSELS (SOME COSTING AS MUCH AS $30,000. PER DAY TO OPERATE) MUST HAVE A QUICK TURNAROUND WITH GOOD LABOR, RAPID CARGO HANDLING AND NO UNNECESSARY DELAYS.

ADDRESSING OURSELVES TO THE LATTER BRINGS INTO FOCUS THE NEED FOR THE WIDENING OF THE FOUR (400') HUNDRED FOOT CHANNEL THAT ARE IN THE INNER HARBOR TO FIVE HUNDRED (500').

EXPERIENCE WITH THE LARGE VESSELS WHO CALL AT THE PORT HAS VIVIDLY SHOWN US THAT THEY REQUIRE MORE ROOM. ONLY THRU CAREFUL PLANNING ARE WE ABLE TO MAINTAIN THE PORT'S SAFETY RECORD.

THE PROPOSED WIDENING OF THE CHANNELS WILL, IN MY OPINION, PROVIDE THAT MARGIN THAT WILL ENABLE US TO HAVE A TWENTY-FOUR HOUR, TWO WAY TRAFFIC PORT OF NO DELAYS, DUE TO INADEQUATE CHANNEL WIDTH.

RECENT INQUIRES HAVE ALLUDED TO SHIPS CONSIDERING THE PORT OF 130' BEAMS, SO THE PERSPECTIVE IS TO BE EVER CHANGING.

AFFIRMATIVE ACTION ON THE MATTER WILL GUARANTEE THE PORT OF SAVANNAH THE GREATNESS SHE DESERVES.

THE TIMELESSNESS OF THE DECISION TO PROCEED MUST COME BEFORE FURTHER DEVELOPMENT ON THE NORTH SIDE OF THE CHANNEL MAKES IT IMPOSSIBLE.

THANK YOU,

OFFICES AT:
CHARLESTON, S.C.
SAVANNAH, GA.
BRUNSWICK, GA.
JACKSONVILLE, FLA.
PORT EVERGLADES, FLA.
MIAMI, FLA.
PENSACOLA, FLA.
MOBILE, ALA.
PASCAGOULA, MISS.
NEW ORLEANS, LA.
GALVESTON, TEXAS
HOUSTON, TEXAS
NEW YORK, N.Y.
CHICAGO, ILL.
ST. LOUIS, MO.
DALLAS, TEXAS
MEMPHIS, TENN.
ATLANTA, GA.
GREENVILLE, S.C.

STRACHAN SHIPPING COMPANY
ESTABLISHED 1886
SHIP AGENTS & STEVEDORES

CABLE ADDRESS "STRACHAN"
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TELEPHONE [illegible]

P.O. BOX [illegible]
SAVANNAH, GA.
31402

DIRECT SERVICES TO:
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MEDITERRANEAN, ADRIATIC AND RED SEA
MEXICO
PAKISTAN AND INDIA
SCANDINAVIA AND BALTIC
SOUTH AMERICA
UNITED KINGDOM AND EIRE

June 8, 1976

Col. Frank Walter
Corps of Engineers
U. S. Army
P. O. Box 889
Savannah, Georgia 31402

Dear Colonel Walter:

For the record, we would like to express our strong support for the proposed widening of the Savannah harbor from 400 feet to 500 feet up to the King's Island Turning Basin opposite the Garden City Terminals of the Georgia Ports Authority.

Our Company was established in Savannah in 1886 and now represents many owners of vessels calling in Savannah, including the owner of the NEW YORK MARU and the NEW JERSEY MARU. We know from our own experience that the owners of large, very costly vessels are vitally concerned with navagational safety. We are sure that Savannah will continue as a major port only with continued harbor improvements and adequate maintenance.

Sincerely,

Thomas H. Adams
Thomas H. Adams
President

THA:jm

SAVANNAH MARITIME ASSOCIATION
P. O. BOX 86
SAVANNAH, GA. 31402

ANTHONY V. RYAN, SR.
SECRETARY

March 13, 1974

Savannah District Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Attention: Colonel Edwin C. Keiser
District Engineer

Re: PUBLIC MEETING ON SAVANNAH HARBOR-WIDENING
MARCH 13, 1974

Dear Colonel Keiser:

We refer to your notice of February 13, 1974, relative to the captioned meeting concerning the proposed widening of a portion of the Savannah River Channel.

We take present means to express our concurrence with the views of the Savannah Port Authority favoring the widening of the Savannah channels between the Fig Island turning basin and the Kings Island turning basin.

The members of the Savannah Maritime Association have noted the definite trend towards larger cargo and tanker type vessels. It is imperative that harbor improvements be kept abreast of these developments. The port of Savannah with its great economic impact can ill afford to fall behind in its competitive battle with the ports of Charleston and Jacksonville.

The Savannah Maritime Association urges early implementation of these essential harbor improvements.

Yours very truly,

CHARLES E. SUTLIVE
PRESIDENT

CES/pc

cc: Members

SAVANNAH PILOTS ASSOCIATION
WE SERVE THE PORT

DIESEL PILOT BOATS "M/V GEORGIA" AND "M/V SAVANNAH PILOT"

204 EAST BAY STREET • POST OFFICE BOX 9267

SAVANNAH, GEORGIA 31402

August 27, 1976

Colonel Frank Walter
District Engineer
U.S. Army Corps of Engineers
Post Office Box 889
Savannah, Georgia 31402

Dear Colonel Walter:

The 400-foot channel in the upper reaches of the Savannah Harbor presents unique and sometimes dangerous navigational problems. Although there is little documentation the problem remains and is dealt with through informal routing of vessel traffic.

Ship arrivals and departures, especially with the very large ships which call here, are timed to avoid unnecessary passing in the 400-foot channel. Such timing inevitably involves delay costs to shippers.

Savannah is not geographically blessed with a natural harbor. To survive in the highly competitive shipping industry, it has been necessary for us to accommodate increasingly large vessels. Movement of these vessels not only affects and delays the larger vessels but also causes delays to vessels of smaller size which must wait their turns for navigation in the 400-foot channel.

It is extremely necessary for the continued success of this port that the subject channel be widened to eliminate the costly factors of delays to shippers.

Very truly yours,

William T Brown

William T. Brown
Master Pilot
Savannah Pilots Association

WTB/epj

FINAL

ENVIRONMENTAL STATEMENT

CHANNEL WIDENING FOR NAVIGATION

SAVANNAH HARBOR, GEORGIA

77001

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA
JUNE 1978

SUMMARY

CHANNEL WIDENING FOR NAVIGATION
SAVANNAH HARBOR, GEORGIA
77001

( ) REVISED DRAFT ENVIRONMENTAL STATEMENT (X) FINAL ENVIRONMENTAL STATEMENT

Responsible Office: District Engineer, Savannah District, U.S. Army Corps of Engineers, P.O. Box 889, Savannah, Georgia 31402 Phone No. (912) 233-8822.

1. Name of Action: ( ) ADMINISTRATIVE (X) LEGISLATIVE

2. Description of Action: The recommended plan of improvement consists of widening the Savannah Harbor navigation channel between the present upstream limit of the 500-foot channel between Fig Island Turning Basin (mile 13.3) and Kings Island Turning Basin (mile 18.9) from 400 to 500 feet by 38 feet depth with two feet of overdepth dredging on the northern side of the channel. The disposal areas to be used will be areas C, F, and G.

3. a. Environmental Impacts: Increase the ability and improve the safety of the Savannah Harbor to accommodate ocean-going vessels and maintain and increase local, State and region-wide economic levels. Decrease the breeding habitat for mosquitoes in disposal area C.

b. Adverse Environmental Effects: Temporary increase in turbidity and suspended solids, loss of plankton and benthic organisms during dredging activities and the elimination of approximately 27 acres of terrestrial land and its associated industrial usage on the northern bank of the Savannah River. Increased elevation and destruction of the existing vegetation on the 309 acres in the disposal areas.

4. Alternatives: Structural alternative of widening the harbor; foregoing the proposed project, nonstructural alternative of programming harbor traffic; and the structural alternative of construction of a barge lane on the north side of the existing channel.

5. a. Comments Received (District Review):

U.S. Environmental Protection Agency
Federal Energy Administration
U.S. Department of Health, Education and Welfare
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
U.S. Department of Commerce
National Marine Fisheries Service, NOAA Georgia Office
of Planning and Budget

b. Comments Received (Departmental Review):

U.S. Environmental Protection Agency
U.S. Department of the Interior
U.S. Department of Commerce, NOAA

6. Draft Statement filed with CEQ 7 June 1976.

Revised draft Statement filed with CEQ 6 September 1977.

Final Statement filed with EPA __________.

FINAL
ENVIRONMENTAL STATEMENT
CHANNEL WIDENING FOR NAVIGATION
SAVANNAH HARBOR, GEORGIA
77001

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FINAL
ENVIRONMENTAL STATEMENT
CHANNEL WIDENING FOR NAVIGATION
SAVANNAH HARBOR, GEORGIA
77001

1.00 Project Description.

1.01 Legislative history. Congressional authority for the operation and maintenance of Savannah Harbor dates back to 1829. Since that time, there have been numerous authorizations for the improvement and maintenance of the Savannah Harbor navigation channel. The existing Savannah Harbor project was authorized by numerous River and Harbor Acts dating back to March 1907, the most recent being the River and Harbor Act of 27 October 1965. Modifications have also been authorized under the Section 201 authority of the Public Works Committees. The most recent authorization under this authority concerned House Document No. 94-520 dated 9 June 1976.

1.02 Study Authorization. The Committee on Public Works of the House of Representatives, United States, at the request of local interests adopted a resolution on 10 July 1968 authorizing a study to determine the advisability of widening the channel between the present limit of the 500-foot channel and Seaboard Coast Line Railroad Bridge. Subsequently, by a letter in January 1972 the District Engineer, at the request of the Savannah Port Authority, recommended an increase in the scope of the widening study to include that part of the navigation channel between the Seaboard Coast Line Railroad Bridge and Kings Island Turning Basin. This recommendation was approved by OCE on 13 January 1972.

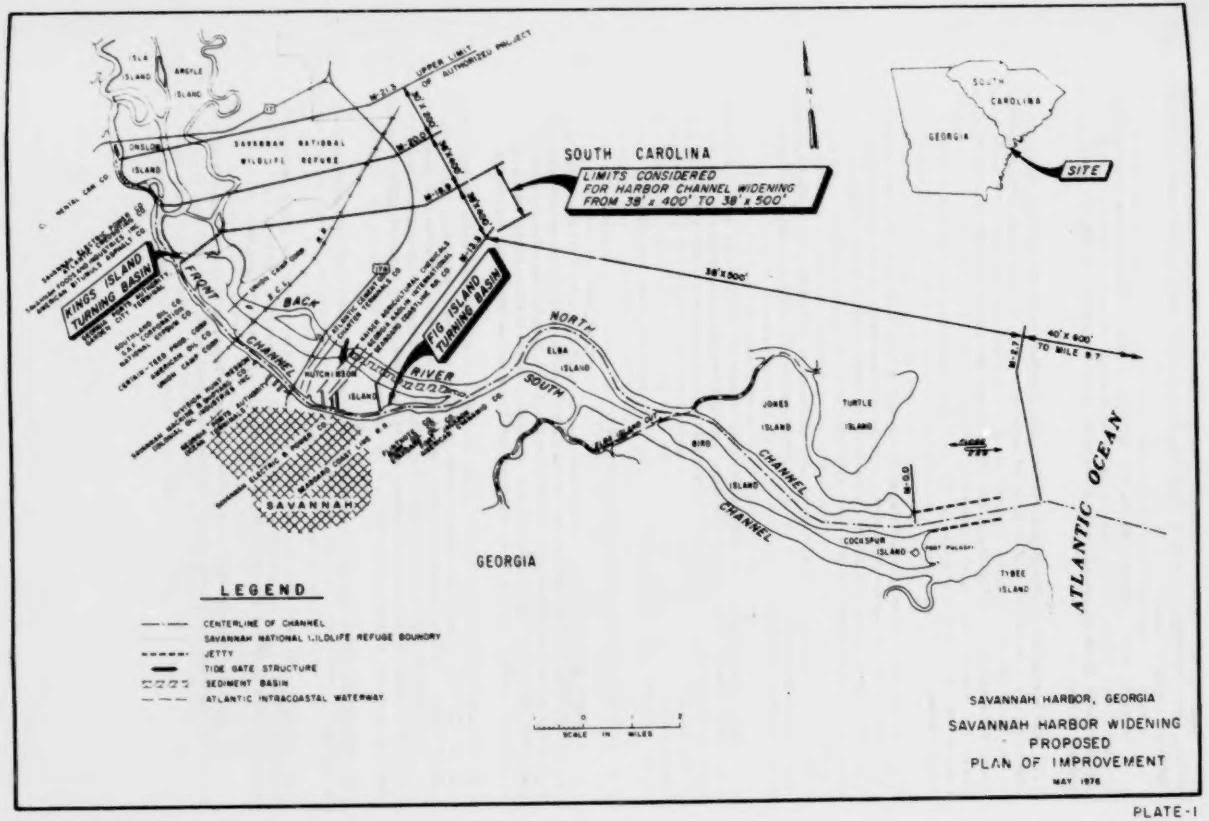
1.03 Project Location. The Savannah Harbor entrance, at the mouth of the Savannah River, is 75 statute miles south of Charleston Harbor, South Carolina, 70 statute miles north of Brunswick Harbor, Georgia, and 120 statute miles north of Jacksonville Harbor, Florida. The Savannah River, with certain of its tributaries, constitutes the boundary between South Carolina and Georgia. The Savannah Harbor comprises the lower 21.3 miles of the river, beginning at the mouth of the Savannah River and extending upstream to Port Wentworth, Georgia. In addition, a channel 10.8 miles in length is maintained from the mouth of the harbor across the bar to the Atlantic Ocean.

1.04 Recommended Plan. The selected plan was determined to be the most responsive and feasible means of accommodating the new generation of vessels calling and planning to call at the Port of Savannah within the scope of the authorized study. The plan provides for modification of the harbor by widening the navigation channel between the present upstream limit of the 500-foot channel (Fig Island Turning Basin, mile 13.3) and the Kings Island Turning Basin (mile 18.9) from 400 to 500 feet (see plate 1). This plan would be accomplished by dredging the material in the following manner:

Reach 1, which extends from Fig Island Turning Basin upstream to the Engineer Yard, would be dredged using a pipeline dredge, pumping 344,000 cubic yards of material to Area C.

Reach 2, which extends from the Engineer Yard upstream to the slip at Georgia Kaolin, would be dredged with a dragline with the 462,000 cubic yards of material hauled to Area F(a).

Reach 3, which extends from the slip at Georgia Kaolin upstream to the Talmadge Bridge, would be dredged using a dragline with the 512,000 cubic yards of material hauled to Area F(6).



SAVANNAH HARBOR, GEORGIA
SAVANNAH HARBOR WIDENING
PROPOSED
PLAN OF IMPROVEMENT
MAY 1976

PLATE-1

Reach 4, which extends from the Talmadge Bridge upstream to the SCL Railroad Bridge, would be dredged using a pipeline dredge with the 472,000 cubic yards of material pumped to Area C.

Reach 5, which extends from the SCL Railroad Bridge to the upstream limits of the project (Kings Island Turning Basin), would be dredged using a pipeline dredge with 861,000 cubic yards of material pumped to Area G and the remaining 286,000 cubic yards pumped to Area C.

1.05 Implementation of the selected plan would involve the dredging and disposal of approximately 2.95 million cubic yards of material. This material would be deposited on the three selected disposal areas which would be diked and provided with waste weirs where the material is to be pumped in. These lands are currently available as disposal areas for use by the local interest. Dredging will also be restricted from February-May to ensure protection of the anadromous species which migrate through the project area.

1.06 In addition to the 100 feet required for the actual widening, 125 feet would be required for the new harbor line that is to be established. The Port Authority is presently requiring the additional 125 feet to take into account proposed future widening of the Savannah Harbor. The bulkhead of the Corps of Engineers yard would have to be relocated. Other existing piers and bulkheads located in reaches of the river to be widened would also require relocations where affected. Furthermore, there would be approximately 27 acres of terrestrial land on the northern bank of the river which would be eliminated.

1.07 Economic Analysis. The economic analysis reflects 1976 price levels (50-year life, 6-3/8 percent interest rate) and the project benefit-cost ratio is 2.21 to 1.0. Benefits supporting the economic feasibility of the project are estimated to be $1,438,000 annually derived from: (1) transportation savings (96.2 percent); (2) redevelopment (0.4 percent); and enhancement (3.4 percent). The total estimated cost of the project is $9,732,000, which represents an annual cost of $650,000.

2.00 Environmental Setting Without the Project.

2.01 Savannah Harbor Channel. Savannah Harbor is a deep draft harbor comprised of 10.8 miles of channel across the bar to deep water in the Atlantic Ocean and the lower 21.3 miles of the Savannah River. With certain of its tributaries, the Savannah River forms the boundary of South Carolina and Georgia. Miles referred to hereafter are miles above the mouth (mile 0) of the Savannah River unless otherwise designated.

2.02 Although Congressional authority for the development of Savannah Harbor dates back to 1829, the actual use of the harbor as a shipping port predates this some 96 years to 1733. In the intervening years, the channel has been widened and deepened, and groins, training walls, and a closure dam have been added. With each increase in depth and attempt to confine the channel, salinity intrusions progressed upstream, and shoaling problems became more acute.

2.03 Dimensions of the presently authorized navigation channels and turning basins are as follows.

2.04 Channels. 40 feet deep and 600 feet wide from deep water in the ocean (mile 10.88, Bar channel) to the entrance to the channel between the jetties (mile 2.68); thence 38 feet deep and 500 feet wide to the harbor entrance (mile 0.0).

38 feet deep and 500 feet wide, with necessary wideners at the bends, from mile 0.0 to the upstream end of Fig Island Turning Basin (mile 13.3).

38 feet deep and 400 feet wide from mile 13.3 to the upstream end of Kings Island Turning Basin (mile 18.9).

36 feet deep and 400 feet wide from mile 18.9 to the upstream end of Argyle Island Turning Basin (mile 19.9).

30 feet deep and 200 feet wide from mile 19.9 to the upstream limit of the project (mile 21.3).

2.05 Turning Basins. Port Wentworth and Argyle Island Turning Basins; 600 feet wide, 600 feet long, and 30 feet deep.

Marsh Island and Fig Island Turning Basins: 900 feet wide, 1,000 feet long, and 34 feet deep.

Kings Island Turning Basin is presently 980 feet wide, 1,000 feet long, and 34 feet deep. However, recent authorization provides for the Kings Island Turning Basin to be enlarged to a width of 1,500 feet, a length of 1,600 feet, and a depth of 38 feet. This recent authorization also provided for the incorporation of Georgia Port Authority's LASH Turning Basin as an element of the existing Federal navigation project. This basin is 40 feet deep by 1,050 feet wide by 1,200 feet long.

2.06 Additional harbor improvements also provide for sediment control works consisting of a tidegate structure across Back River; a sediment basin 40 feet deep, 600 feet wide, and 2 miles long with an entrance channel 38 to 40 feet deep and 300 feet wide; a drainage canal 15 feet deep and 300 feet wide across Argyle Island; control works and canals for supplying freshwater to the Savannah National Wildlife Refuge; and freshwater facilities to mitigate damages to areas other than refuge lands. The Final Environmental Statement for the Savannah Harbor Sediment Basin Project was filed with CEQ on 12 March 1975.

2.07 The Final Environmental Statement for the Widening and Deepening of Savannah Harbor was prepared and coordinated with Federal, State and local organizations and was filed with CEQ on 7 January 1975. The proposal to enlarge the Kings Island Turning Basin and to incorporate the Georgia Ports Authority's LASH (Lighter Aboard Ship) turning basin adjacent to Cockspur Island as an element of the existing Federal navigation project for Savannah Harbor was adopted on 9 June 1976 in House Document No. 94-520 and the Final Environmental Statement on this plan of improvement was filed with CEQ on 17 June 1976. A Final Environmental Statement on the Operation and Maintenance of Savannah Harbor, Georgia, was filed with CEQ on 30 January 1976.

2.08 Savannah River, within the harbor limits, is generally divided into two channels by a series of interconnecting islands. From the Atlantic Ocean to mile 10, where the river converges, the harbor is separated into South and North Channels. Within this area, the navigation channel is maintained in the North Channel. After divergence of the river into Front and Back Rivers at mile 11, the navigational channel is maintained in Front River to the upper limits of the harbor at mile 21.3.

2.09 Approximately 6 miles above the harbor mouth, the Atlantic Intracoastal Waterway crosses the harbor navigation channel. An authorized barge channel 9 feet deep and 90 feet wide extends from the upper limits of the harbor up the Savannah River to mile 202.6 at Augusta, Georgia.

2.10 Climate. The area has a temperate climate, with a seasonal mean temperature of 51 degrees F. in winter, 64 degrees F. in spring, 80 degrees F. in summer and 66 degrees F. in autumn. The growing season averages 273 days from an average date of last freeze on 26 February to a first freeze in autumn on 26 November. The lowest recorded temperature for the area is 8 degrees F. and the highest is 105 degrees F. Summer temperatures are moderated almost every afternoon by thunderstorm activity. Of

TABLE 1

NORMAL TEMPERATURES AND PRECIPITATIONS* FOR
U.S. PLANT INTRODUCTION STATION
SAVANNAH, GEORGIA

MONTH	TEMPERATURES °F	PRECIPITATION (INCHES)
January	51.4	2.94
February	52.4	3.42
March	58.4	3.66
April	64.5	2.83
May	71.6	3.16
June	78.5	6.52
July	80.6	7.47
August	81.9	6.65
September	76.5	7.10
October	66.5	2.49
November	56.6	1.76
December	50.8	2.79
TOTAL		50.79
MEAN	65.8	4.23

*Temperatures and precipitations based on 40 years data. (1931 to 1970)

TABLE 2
SAVANNAH HARBOR, GEORGIA
CHEMICAL COMPOSITION OF SEDIMENTS

Station Number	Grain size	Volatile solids (6%)	COD (5%)	Total K nitrogen (0.10%)	Oil and grease (0.15%)	HG ppm	PB ppm	ZN ppm
1	Sandy - silt	6.2	4.7	0.06	0.09	0.03	12	74
2	Silt	6.6	4.8	0.14	0.14	0.05	26	93
3	Sandy - silt	5.5	4.3	0.10	0.21	0.10	22	70
4	Silt	15.0	13.6	0.36	0.95	0.10	41	140
5	Clayey - silt	20.0	19.5	0.28	0.87	0.10	39	120
6	Silt	17.0	15.9	0.21	0.46	0.10	27	120
7	Sand and gravel	0.7	1.5	0.05	0.09	0.02	9	31
8	Coarse sand	0.7	2.6	0.04	0.08	0.01	8	28

NOTE: Samples collected 21 September 1975.
Samples analyzed 22 September - 4 October 1975.

the normal 48.91 inches of rain, about half falls in the thunderstorm season of 15 June through 15 September. The remainder, produced principally by squall-line and frontal showers, is spread over the other 9 months with a minor peak in March. Snow is a rarity and does not occur even on an average of once a year. Severe tropical storms affect this area about once in 10 years.

2.11 Channel Sediments. Materials excavated from the Savannah Harbor can be dividud into three distinct groups. The first group, consisting of sediments composed of broken shells, gravel, and coarse to very fine sand, is typical of the materials found between the ocean bar and the jetties.

2.12 Materials found between the jetties and Kings Island embrace the second group. These sediments are largely deposits of silts, soft blue clays, gravels and coarse to fine sands. The third group of sediments is found between Kings Island and the upper limit of the harbor. These materials consist of hardened and compacted silts, sands, clays, and mica. This is the only reach within the harbor where compacted materials are encountered.

2.13 The total estimated annual sediment being removed from the inner harbor is 8.1 million cubic yards. The sources of these sediments include the Savannah River from upstream; the surrounding area runoff; and the ocean on floodtide.

2.14 The environmental aspect of dredging in the proposed project area which may lead to possible ecological damages is the water quality impairment of the surrounding water during the dredging operations. To evaluate the impact of dredging on the impairment of water quality, chemical analyses and the standard elutriate test were made on the sediments and water samples collected in the Savannah Harbor area (see figure 1 for sample locations and tables 2 and 3 for the chemical analyses of sediments and the standard elutriate test, respectively).

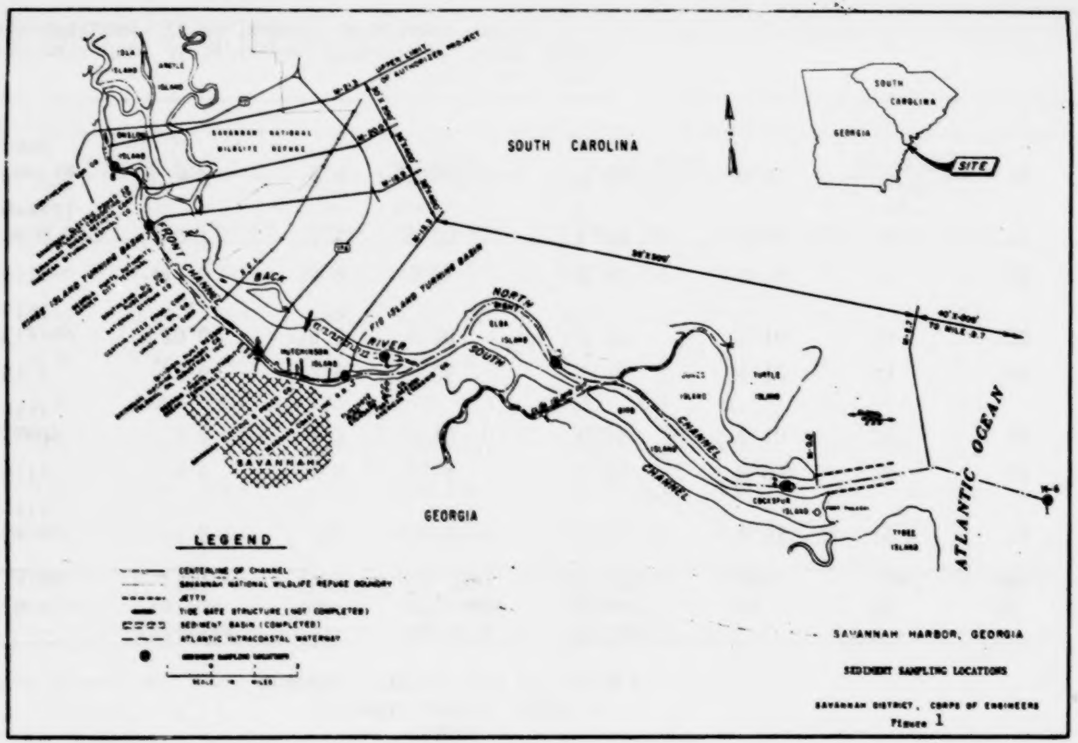
2.15 Hydrology. Tidal fluctuations within Savannah Harbor are semidiurnal, averaging 6.9 feet at the mouth of the harbor and 7.0 feet at mile 21.3, with tidal influences extending upriver approximately 45 miles to the vicinity of Ebenezer Landing, Georgia. Maximum velocities encountered in the navigation channel approach 4 feet per second on floodtide and 5 feet per second on ebbtide.

2.16 Freshwater inflow into the Savannah River at mile 61 near Clyo, Georgia, since 1962, has averaged 11,600 cubic feet per second (cfs), with maximum and minimum annual mean discharges of 20,900 cfs and 9,820 cfs, respectively.

2.17 The extent of saltwater intrusion in Savannah Harbor varies with the tidal stage and amount of freshwater flow in the river. Salinity values from Highway 17 bridge obtained from EPA for the years 1958-1968 ranged from .03 to 11.38 ppt (228 observations) with a mean of .13 ppt. Only six observations exceeded .21 ppt durng this time.

2.18 Ground Water. The ground water supply in the Savannah area is available from two sources--a relatively shallow groundwater table and a deeper artesian aquifer. The majority of the water supply for domestic and industrial use is obtained from the deeper artesian aquifer in the Savannah area. River water and the shallow ground water table are prevented from entering the artesian aquifer by an impermeable bed of silts and clays (aquiclude) 150-200 feet thick overlying the artesian aquifer.

2.19 Water Quality. Prior to 1971, the harbor waters were degraded by untreated and treated domestic, industrial, and marine discharges. Since then, however, numerous changes and enforcements of Federal and State water quality standards, improved abatement measures by municipal and industrial sources, and public awareness have considerably improved the water quality throughout the entire harbor reach of the Savannah River.



SAVANNAH HARBOR, GEORGIA

SEDIMENT SAMPLING LOCATIONS

SAVANNAH DISTRICT, CORPS OF ENGINEERS
Figure 1

TABLE 2
SAVANNAH HARBOR, GEORGIA
CHEMICAL COMPOSITION OF SEDIMENTS

Station number	Grain size	Volatile solids (6%)	COD (5%)	Total K nitrogen (0.10%)	Oil and grease (0.15%)	Hg ppm	Pb ppm	Zn ppm
1	Sandy - silt	6.2	4.7	0.06	0.09	0.03	12	74
2	Silt	6.6	4.8	0.14	0.14	0.05	26	93
3	Sandy - silt	5.5	4.3	0.10	0.21	0.10	22	70
4	Silt	15.0	13.6	0.36	0.95	0.10	41	140
5	Clayey - silt	20.0	19.5	0.28	0.87	0.10	39	120
6	Silt	17.0	15.9	0.21	0.46	0.10	27	120
7	Sand and gravel	0.7	1.5	0.05	0.09	0.02	9	31
8	Coarse sand	0.7	2.6	0.04	0.08	0.01	8	28

NOTE: Samples collected 21 September 1975.
Samples analyzed 22 September - 4 October 1975.

TABLE 3
SAVANNAH HARBOR, GEORGIA
ELUTRIATE TEST RESULT

Station number	Total K nitrogen (ppm)			Hg (ppb)			Pb (ppb)			Zn (ppb)		
	Conc in water	After mixing	Ratio*	Conc in water	After mixing	Ratio*	Conc in water	After mixing	Ratio*	Conc in water	After mixing	Ratio*
1	0.06	0.40	0.7	0.01	0.2	0.2	0.3	0.3	0.1	17	15	0.1
2	0.20	0.25	0.1	0.02	0.02	0.1	0.6	0.5	0.1	21	25	0.1
3	0.30	0.40	0.1	0.02	0.02	0.1	0.1	0.6	0.6	16	6	0.1
4	0.30	1.95	0.6	0.03	0.03	0.1	0.3	0.2	0.1	26	10	0.1
5	0.30	1.40	0.4	0.02	0.03	0.1	0.4	0.3	0.1	3	25	0.9
6	0.65	1.60	0.2	0.04	0.05	0.1	0.6	0.5	0.1	6	2	0.1
7	0.62	0.68	0.1	0.01	0.02	0.2	1.0	0.8	0.1	2	3	0.1
8	0.50	0.70	0.1	0.01	0.02	0.2	0.3	0.8	0.3	5	4	0.1

*Ratio after allowing for 10-fold dilution.

2.20 The State of Georgia, Department of Natural Resources, has classified the various reaches of the Savannah Harbor for the following uses:

Drinking water - U.S. Highway 17 Bridge (mile 21.6) upstream to mile 129

Navigation - U.S. Highway 17 Bridge (mile 21.6) to Fields Cut (mile 5)

Fishing - Fields Cut (mile 5) to Fort Pulaski (mile 0)

Recreation - Fort Pulaski (mile 0) to the Open Sea and littoral waters of Tybee Island

The State of Georgia water quality criteria for the above stream classification are shown in appendix A.

2.21 The Georgia Department of Natural Resources has a routine chemical monitoring station located on U.S. Highway 17 (mile 21.6). U.S. Highway 17 is upstream from all major municipal and industrial discharges in the Savannah area. The waters at this station were of slightly lower quality than those upstream at Clyo. Nutrients, although low, were elevated above background levels. Very little organic or oxygen-demanding materials were present. Fecal coliform densities ranged from low to moderate. The maximum one-time coliform density of 4,000/100 ml was exceeded for three of the ten samples taken. Dissolved oxygen concentrations during the warm weather months were higher than during the previous year. There were no other changes. The over-all water quality has improved slightly.

2.22 The routine chemical monitoring station at Fort Jackson (mile 11) is downstream from most wastewater sources in the area and is near the oxygen sag point. The Savannah River at Fort Jackson was degraded. There were no significant changes from the previous year. Water quality data (Environmental Protection Division, 1975) from U.S. Highway 17 (mile 21.6) to Crossing Range near buoy R28 (mile 2.2) of the Savannah River is included in appendix B.

2.23 Economic Environment. The principal area served by Savannah Harbor comprises Congressional Districts 1 and 8 in Georgia. The 1970 population of this area was about 910,000, of which 187,816 were in Chatham County and 118,349 in the City of Savannah. The July 1974 estimate of the population of Chatham County was approximately 175,400 while the July 1973 estimate for Savannah was approximately 105,768. The Savannah metropolitan area is the primary industrial use of the harbor and within this region more than 200 industrial plants are engaged in the manufacture and production of a wide variety of products including asphalt, roofing materials, fertilizers, vegetable oils, paints, refined sugar, paper and pulp, gypsum, and lumber.

2.24 Deepwater terminals within Savannah Harbor are operated by the Georgia Ports Authority, Georgia International Trading Corporation, and the Seaboard Coast Line Railroad Company. The largest and most modern facilities on the South Atlantic Coast are located in Savannah and are owned by the Georgia Ports Authority. The Garden City Terminal has two bulk liquid berths, seven general cargo berths, two container berths, and over 3 million square feet of warehousing. The Ocean Terminal in downtown Savannah has 12 general cargo berths and 356,000 square feet of warehousing. Also, a LASH (Lighter Aboard Ship) facility with barge-marshaling area is now in operation in the lower reaches of the harbor near Oysterbed Island. Combined facilities of the Seaboard Coast Line Railroad Company and the Georgia International Trading Corporation provide the port with an additional 10 berths and over 400,000 square feet of storage space. A liquified natural gas (LNG) facility on Elba Island is nearing completion.

2.25 The value of cargo passing through the port in 1974 was approximately $1 billion. This cargo value generated an economic impact approximately three times its original value in the local economy. U.S. Customs revenue on foreign commerce in 1974 totaled $46 million.

2.26 Principal commodity tonnages by vessel type for 1974 are presented in table 4.

2.27 Noise. Noise pollution is not a serious problem within the project area and is no greater than that which would normally be expected in a metropolitan area. Distracting disturbances created by vehicular traffic, industrial activities, vessel signals, and aviation activities occur only at infrequent intervals.

2.28 Air Quality. The control of air pollution is set forth in the Rules and Regulations of Air Quality Control, Georgia Department of Natural Resources. Air quality in the project area is being monitored and must meet the national secondary ambient air quality standards, as set forth by the Environmental Protection Agency pursuant to the Clean Air Act, as amended, except in some isolated areas. These standards are set for six pollutants: Sulfur oxides, particulate matter, carbon monoxide, photochemical oxidants, hydrocarbons, and nitrogen dioxide. The standards for secondary ambient air quality are of the highest and represent air quality requisites to protect the public welfare from any known or anticipated adverse effects associated with the presence of air pollutants. State and Federal ambient air standards for sulfur dioxide were met in 1974. However, the State standard for SO_2 of 229 ug/m^3 for 24 hours was exceeded on 25 December 1974. In addition, the State standard of 60 ug/m^3 annual geometric mean for particulates was exceeded at two sites in the Savannah area.

2.29 Major industries in the Savannah Harbor area have made necessary changes in the design of their plants to meet the air quality standards. As a result of these changes, possible visibility problems for harbor traffic and discomfort to personnel during atmospheric conditions resulting from stack emission of particulates have been minimized.

2.30 Wildlife Resources. In 1931, the U.S. Fish and Wildlife Service established the Savannah National Wildlife Refuge encompassing 13,000 acres of once-cultivated lowlands and marshes along the northern bank of the lower Savannah River. The Refuge is located within the extremities of the Atlantic Flyway and provides an important nesting area for the wood duck. Since its establishment, approximately 3,000 acres of old ricefields have been impounded, thus providing ideal resting and feeding areas for many thousands of migratory waterfowl each year.

2.31 The U.S. Fish and Wildlife Service has recorded over 224 species of birds on the Refuge, of which 83 species are known to nest locally. Four endangered or rare species, the brown pelican (Pelecanus occidentalis), southern bald eagle (Haliaeetus leucocephalus leucocephalus), American peregrine falcon (Falco peregrinus anatum), and red-cockaded woodpecker (Dendrocopus borealis) are transient to the Refuge and general area.

2.32 A few of the primary waterfowl utilizing the Refuge include: wood duck, mallard duck, ring-necked duck, blue-winged teal, widgeon and pintail. Other game birds include the coots, gallinules and snow geese. Species of migratory birds, other than waterfowl, that regularly use the Refuge in large numbers are: piedbilled grebe, great blue heron, little blue heron, common egret, least bittern, king rail, cattle egret, white ibis, spotted sandpiper, solitary sandpiper, common snipe, ring-billed gull, American bittern and black tern.

2.33 The American alligator, an endangered species, is abundant on the Refuge as are various other species of reptiles and amphibians.

2.34 White-tailed deer, an important game animal in the southeast, inhabit the higher terrain of the Refuge and surrounding area along with rabbits, raccoons, opossums, squirrel, gray fox, bobcat and several other species of small mammals.

TABLE 4

SUMMARY OF MAJOR COMMODITY-GROUP MOVEMENTS BY VESSEL TYPE
SAVANNAH HARBOR, GEORGIA
1974 AND PROJECTED YEARS
(THOUSANDS OF TONS)

	1974	1980	1990	2000	2010	2020	2030
General Cargo:							
Pulp and Paperboard	777.7	1233.5	1975.0	2974.5	4089.7	5507.4	7304.7
Iron and Steel Shapes	406.5	518.9	864.2	1300.0	1788.5	2420.4	3242.4
Basic Textiles	204.7	267.2	348.3	444.3	547.2	671.2	820.9
Fabricated Metal Prod.	165.6	219.4	386.7	597.9	834.6	1140.7	1539.0
Subtotals	(1554.5)	(2239.0)	(3574.2)	(5316.7)	(7260.0)	(9739.7)	(12907.0)
Liquid Bulk:							
Distillate & Residual Fuel & Naptha	2391.9	3926.3	6321.1	9344.7	12733.5	17116.5	22819.2
Sodium Hydroxide	141.9	182.8	239.6	316.2	401.7	510.4	648.2
Gasoline	789.1	715.0	715.0	715.0	715.0	715.0	715.0
Liquid Sulfur	133.9	145.0	145.0	145.0	145.0	145.0	145.0
Crude Petroleum	913.1	245.0	245.0	245.0	245.0	245.0	245.0
Asphalt, Tar & Pitches	391.8	235.0	235.0	235.0	235.0	235.0	235.0
Subtotals	(4761.7)	(5449.1)	(7900.7)	(11000.9)	(14475.2)	(18966.9)	(24807.4)
Dry Bulk:							
Kaolin Clay	678.6	1105.5	1643.3	2247.6	2880.6	3656.3	4608.1
Gypsum	628.7	768.4	1073.4	1499.6	2095.0	2926.8	4088.8
Coke, Petroleum Asphalts and Solvents	262.2	145.0	145.0	145.0	145.0	145.0	145.0
Building Cement	198.0	225.0	225.0	225.0	225.0	225.0	225.0
Subtotals	(1767.5)	(2243.9)	(3086.7)	(4117.2)	(5345.6)	(6953.1)	(9066.9)
TOTALS	8083.7	9932.0	14561.6	20434.8	27080.8	35659.7	46781.3

2.35 The habitat to support this wide diversity of wildlife is provided by more than 900 species of plants and several distinct ecological units within the Refuge. Described here are only a few of the more common botanical species inhabiting the various ecological units. Managed pools: white waterlilies, bladderworts, pickerelweed, water hyacinth. Tidal marshes: Peltandra, sawgrass and smooth cordgrass. Wetlands: bald cypress, sweet gum, red maple and cattail. Terrestrial: pine, hickory and red oak.

2.36 The Savannah Harbor area affected by the widening project is generally vegetated with early successional species of plants. Most of the area has had heavy disturbance over the harbor's past history. Much of the area to be widened and some of the disposal areas have early successional forest with willow, sycamore, and popcorn tree being the dominant species of trees. Other parts of the area to be widened and some of the other disposal areas are covered with dense herbaceous growth, including shrubs and perhaps small trees. Some of the common plants are rattlebox, horsetail, ironweed, elderberry, trumpet vine and various species of grasses and sedges. The drainage ditches and canals in this area have aquatic plants such as cattail, alligator weed, duckweed, arrowhead, pickerelweed and sawgrass.

2.37 Public waterfowl hunting is permitted on approximately 3,000 acres of river marsh between Front and Back Rivers and nonconsumptive activities such as sightseeing, bird-watching and nature studies are encouraged. A nature trail provides an all-season opportunity for the visitor to glimpse the Refuge's natural beauty and wildlife.

2.38 Many miles of drainage and irrigation canals along with several pools are open for public fishing from March to October on the Refuge. Principal species taken include blue-gill, crappie and largemouth bass. Land-locked flounder and striped bass are caught in one pool while along the river, such species as redbreast, blue-gill and catfish are the principal species taken. (See appendix C for a more complete listing of biota.)

2.39 Aquatic Resources. Wetland areas play a very important role in wildlife conservation, not only for waterfowl, but also for other species of wildlife. Salt water marches are an integral component of the estuarine intertidal and adjacent shallow-water zones. These zones are the most productive, and hence most important, parts of the estuarine nursery grounds. They are considered by many to be extremely critical habitats--harboring, nourishing, and producing an exceptional array of vertebrate and invertebrate fauna. While waterfowl are the most obvious occupants of this habitat, one must not overlook the fact that the young growth stages of many important commercial and sport fishes species are dependent upon the nursery grounds for food and protection.

2.40 The vegetation of the lower Savannah River complex is varied with smooth cordgrass (Spartina alterniflora) the predominate species in the salt marshes of the lower reaches of the harbor. As one goes up the Savannah River, the marsh vegetation gradually changes from predominately salt marsh species to a mixture of brackish and fresh water species. This zone of transition is characterized by the presence of many of the salt marsh grasses, but with a much greater diversity of vegetation. Black needle rush (Juncus roemerianus) is commonly found in the marshes. However, though abundant, it is considered to be less productive than Spartina alterniflora because the black needle rush is usually associated with the high fringe areas located above mean high tide.

2.41 The biotic community of the Savannah River estuary may be divided into three major groups, planktonic, benthic and nektonic. The planktonic community is composed of algae, diatoms, copepods, cladocerans, rotifers, molluscs, insects, plychaetes and other invertebrates (Rees, 1972).

2.42 Rees, R. A. (1972) reported that the Savannah River, in the vicinity of Port Wentworth, Georgia, was rich and abundant in benthic fauna in 15 feet of water on a mud-flat substrate. Polychaete and oligochaete worms constituted 28 to 33 percent of all benthic organisms (all stations) over the year. Anthurid isopods and gammarid amphipods were next in abundance, followed by chironomid insect larvae, and finally, pelecypod molluscs (clams). The monthly mean was 1,161 organisms per square meter with peak abundance in the spring (March-June).

2.43 The nektonic community includes many species of fish and invertebrates, some of which are of commercial and recreational value. Tables 5 and 6 give a list of vertebrates and invertebrates captured in the Savannah River during 1972 by otter trawling. Fish species composition data for the Savannah River system during the period 12 July 1967 through 24 August 1967, as reported by the Georgia Game and Fish Commission are as follows: spotted gar, Atlantic memhanden, goldenshiner, shiner, white catfish, channel catfish, American eel, spottail, striped mullet, bay whiff and hogchoker. (See appendix C for a more complete listing of biota.)

2.44 Each spring and fall, the main Savannah River, Back River, Middle River and the numerous interconnecting tidal streams are hosts for the migration of three species of the herring family--American shad (Alosa sapidissima), hickory shad (Alosa mediocris), and blueback herring (Alosa aestivalis) and the striped bass (Morone saxatilis), which are very important game and commercial fish. The American shad enter the Savannah River in mid-January and begin spawning in mid-April. The river temperature at spawning is between 54 degress and 70 degress F. The young shad leave the river in autumn; all are gone by December. Shad spawn in the main river, and further up the river than do striped bass. The American shad is the most commercial anadromous fish in the southeast.

2.45 Hickory shad enter the Savannah River in early January, begin spawning in the tributaries in March and complete spawning in April. Water temperature at spawning is between 64 degrees and 69 degrees F. The young hatch 2-3 days after eggs are laid and leave the river from July to October. The blueback herring, which also enters the river in March and April, must have water temperatures of around 70 degrees F. to spawn.

2.46 Striped bass enter the Savannah River for their spring spawning runs in March, April, or May. The river temperature must be between 58 degrees and 64 degrees F., and the salinity must be between 920 and 948 ppm for optimum spawning success. The striped bass is a free spawner; the eggs must be suspended in the water, as they float upstream before they hatch 36-72 hours after being laid. The last eggs to be observed in the river usually are found at the end of May. Adult striped bass leave the river in August. One group of juveniles leave the river in October and November when the water begins to cool; a second group apparently does not migrate. The primary spawning site in the Savannah River Basin is in Back River, 23 miles upstream from the mouth of the Savannah River.

2.47 Commercial and sport fishing within Savannah Harbor is restricted because of industrial and municipal pollution and heavy cargo traffic in the area. The several marine finfish taken around the mouth of the harbor include the spotted sea trout, spot, croaker and other bottom species. Cobia and tripletail provide for a limited amount of sport fishing in the outer channel. The harbor and certain tributaries are currently closed to commercial shellfishing because of excessive coliform levels.

2.48 Vector Control. Flooded disposal areas and poorly drained farmlands are utilized by mosquito and other nuisance insects as breeding grounds. Prior to World War II, malaria was a major disease in and around Savannah and the Coastal area. In recent years, the Chatham County Mosquito Control Commission, in cooperation with other local organizations, has attained a remarkable degree of mosquito control through sprays and controlled flooding of these breeding grounds.

TABLE 5

SCIENTIFIC AND COMMON NAMES OF VERTEBRATES CAPTURED IN THE SAVANNAH RIVER DURING 1972 BY OTTER TRAWLING (Stickney & Miller, 1973)

FAMILY	SCIENTIFIC NAME[1]	COMMON NAME
Clupeida	*Brevoortia tyrannus*[2] *Opisthonema oglinum*	Atlantic menhanden Thread herring
Engraulidae	*Anchoa hepsetus* *Anchoa mitchelli*	Bay anchovy Striped anchovy
Ictaluridae	*Ictalurus catus*[2]	White catfish Gaftopsail Catfish
Ariidae	*Arius felis* *Bagre marinus*[2]	Sea Catfish Gaftopsail Catfish
Batrachoididae	*Opsanus tau*	Oyster toadfish
Pomatomidae	*Pomatomus saltatrix*[2]	Bluefish
Carangidae	*Chloroscombrus chrysurus* *Vomer setapinnis*	Atlantic bumper Atlantic moonfish
Sciaenidae	*Bairdiella chrysura*[2] *Cynoscion regalis*[2] *Larimus fasciatus*[2] *Leiostomus xanthurus*[2] *Micropogon undulatus*[2] *Stellifer lanceolatus*[2]	Silver perch Weakfish Banded croaker Spot Atlantic croaker Star drum
Mugilidae	*Mugil cephalus*[2]	Striped mullet
Trichiuridae	*Trichiurus lepturus*	Atlantic Cutlassfish
Stromateidae	*Peprilus alepepidotus*	Harvestfish
Bothidae	*Etropus crossotus* *Paralichthys lethostigma*[2]	Fringed flounder Southern flounder
Soleidae	*Trinectes maculatus*	Hogchoker
Cynoglossidae	*Symphurus plagiusa*	Blackcheek tonguefish
Tetraodontidae	*Sphoeroides maculatus*	Northern puffer

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[1] Fishes placed in phylogenetic order according to American Fisheries Society (1970).

[2] Commercially valuable or sought by sport fishermen.

TABLE 6

SCIENTIFIC AND COMMON NAMES OF INVERTEBRATES CAPTURED IN THE SAVANNAH RIVER DURING 1972 BY OTTER TRAWLING
(Stickney & Miller, 1973)

FAMILY	SCIENTIFIC NAME	COMMON NAME
Penaeidae	*Penaeus aztecus*[1]	Brown shrimp
	Penaeus duorarum[1]	Pink shrimp
	Penaeus setiferus[1]	White shrimp
	Xiphopeneus kroyeri[1]	Seabob
Portunidae	*Callinectes sapidus*[1]	Blue crab
	Portunus gibbesii	Crab
Squillidae	*Squilla empusa*	Mantid shrimp
Loliginidae	*Lolliguncula brevis*	Squid

[1] Commercially valuable species

2.49 Transportation. U.S. Highway 17A crosses the harbor at mile 14.9 and U.S. Highway 17 crosses the Savannah River just above the upper limit of the harbor at mile 21.6. Air service is also available through Savannah's Municipal Airport and several local military and private landing fields.

2.50 Archeological and Historical Sites. Within the City of Savannah, an area bordered by East Broad, Gwinnett, West Broad and the Savannah River has been designated as the Savannah Historic District in the "National Register of Historic Places." The historic district is unique because it includes much of the founder's (James Oglethorpe) original city plan, highly regarded because of its important innovations in urban design. Many of the buildings in the District have much architectural merit and exhibit splendid examples of English Regency, Georgian townhouse and Gothic Revival architecture. The District also contains many beautiful churches, public buildings and lovely parks.

2.51 Located approximately 3 miles east of Savannah on the south bank of the Savannah River is Fort Jackson. This fortification has played an important historic role in protecting the City of Savannah since colonial times and has been placed on the National Register of Historic Places. In 1965, Fort Jackson was presented to the Georgia Historical Commission, which was in the process of restoring the structure for use as a maritime museum prior to the closing on 1 September 1975. Currently, the fort is being restored by the Coastal Heritage Society and will be opened to the general public on Labor Day 1976.

2.52 Fort Pulaski, an important Civil War monument, is located 17 miles east of Savannah on Cockspur Island. Constructed in the early 19th century (1829-1847), this facility, which served as a major Civil war fortification along the Georgia coast until its capture in 1862 by Federal troops, was established by Act of Congress as a national monument and is listed in the National Register of Historic Places.

2.53 Another Civil War relic, the sunken CSS GEORGIA, a Confederate ram, is located about mile 11 near the confluence of Front and Back Rivers. The designation of the ship as a significant historical structure is presently being considered by Federal authorities. On 12 February 1976, the Federal Register referenced the pending nomination on the Confederate ram to the National Register of Historic Places, but the ram has not yet been listed. This ship has been located and there will be no dredging in the area of the sunken CSS GEORGIA until its significance can be determined.

2.54 During October 1973, the Institute of Archeology and Anthropology of the University of South Carolina investigated potential archeological sites in the lower Savannah River area. The investigation revealed two sites in disposal area number 12, and one site on the Savannah National Wildlife Refuge. An examination of these sites indicate they cover a time span from about 3500 B.C. through 1100 A.D., with a late historic occupation during the eighteenth and nineteenth centuries. The Corps of Engineers recognizes the importance of these cultural resources. Sites 38Ja23 and 38Ja24 were protected by constructing the west side dike approximately 200 feet eastward of site 38Ja24 and constructing a portion of the north dike around site 38Ja23 of disposal area 12. This construction insured that these areas would not be covered by dredged material removed from the sediment basin.

2.55 Due to the initial construction and subsequent deepening and widening of the Savannah Harbor, any archeological remnants which might have existed along the channel alignments have probably been removed or destroyed. However, a magnetometer survey will be conducted during the Phase I stage of the advanced engineering and design and an archeological survey is scheduled to be conducted in the immediate future by the University of South Carolina. These surveys will determine if there are any archeological or historical remains which will need to be preserved or mitigated in the project area.

2.56 Existing Land Use of the Area to be Removed. Prior to the 1950's, no major local, State or Federal restrictions were applied to either the methods or placements of shoaling materials. Over the 240-year history of the development and maintenance of the Savannah Harbor navigation channel, improvement and maintenance materials were placed along the adjacent river banks in the most economic and convenient locations to the operation. Consequently, over these many years, the nature of the shoreline paralleling the navigation channel was slowly transformed from tidal marsh to a terrestrial community. As a result of the long time use, most of the present area has been disturbed.

2.57 Presently the most intensified use of these lands is between the Corps of Engineers' yard at mile 13.7 and U.S. Highway Bridge 17A at mile 14.9. These are industrial lands used by several industries and shipping companies. The north embankment of the now abandoned bridge of the Seaboard Coastline Railroad and the adjoining land will also be removed in order to create the necessary side slope for the channel.

3.00 Relationship of the Proposed Action to Land Use Plans.

3.01 Coastal Zone Management. The Coastal Zone Management Act of 1972 (Public Law 92-583) was signed by the President on 28 October 1972. Under the Act, the Federal Government (U.S. Department of Commerce, National Oceanic and Atmospheric Administration) will grant to interested coastal states funds for (1) the development of a coastal zone management program and (2) the administration of each State program. Following State development and Federal approval, Federal projects, leases and permits must conform to the State program. Section 304(g) of the Act defines the State "management program" to include:

> ...but is not limited to, a comprehensive statement in words, maps, illustrations, or other media of communication, prepared and adopted by the State ... setting forth objectives, policies, and standards to guide public and private use of lands and waters in the coastal zone.

State development of each coastal State program, in coordination with local government and regional planning commissions, should insure consistent State-wide coastal zone management program and policies.

3.02 A Section 305 grant has been awarded Georgia by the U.S. Department of Commerce for the development of the management program for FY 75-76. A 3-year planning phase will be followed by a 5-year implementation (Section 306) phase.

3.03 The State of Georgia has charged its duties under the Act to the Georgia Office of Planning and Budget (OPB). The OPB is presently developing its base information for the Georgia Coastal Zone Management Program, with analysis of this information and alternative proposals for coastal zone use to follow. At this time, there is no Statewide land-use plan for the coastal zone within Georgia.

3.04 The area between Front and Back Rivers was originally composed of a series of small islands, tidal marshes and shoals interconnected by shallow waterways. For the past 200 years, this area has undergone extensive environmental changes through the construction of dikes, training walls and the deposition of dredged materials.

3.05 Old root systems, logs, and tree stumps visible in the soil profiles northeast of Back River, indicate the probability that in pre-Colonial times this site supported a swamp-hardwood type forest. Probably most of the trees were cut for timber sometime in the 1700's. After removal of the timber, several thousand acres were leveled, diked and irrigated for the production of rice, pastures and other crops. By the late 1930's, most of these lands had been abandoned resulting in the natural establishment of aquatic and semi-aquatic stands of sedge (*Cyperaceae*), bulrush (*Scirpus*) and grasses

(*Gramineae*); while the canal dikes, drainage ditches and small islands supported pine (*Pinus*) and deciduous tree growth.

3.06 Several of the old plantations lying southeast of the Savannah Wildlife Refuge are still in operation although rice production, at least for the present, has been discontinued. Many of the old ricefields have been flooded to provide waterfowl habitat for private hunting, while the drier sites are today seeded to pasture, small grains and a few row crops.

4.00 The Environmental Impact of the Proposed Action.

4.01 The effects on the environment resulting from the implementation of the selected improvements to Savannah Harbor would be related to dredging and disposal of an estimated 2.9 million cubic yards of material. Shoaling in the Savannah Harbor is mainly a result of sediments being deposited by incoming tides, by flows down the Savannah River, and by inflows from the surrounding area. The removal of this shoaling requires approximately 6 million cubic yards of sediment to be dredged annually from the harbor area and an additional 1 million cubic yards from the bar channel. Since the shoaling is dependent on these inflows and not upon the size and shape of the channel, the addition of 27 acres should not significantly affect the current amount of sediment to be removed in the annual maintenance of the Savannah Harbor.

4.02 Dredged Material Disposal. The dredged material removed during the dredging operations will be deposited in disposal areas C, F, and G. Areas C and G will require the construction of dikes to contain the dredged material and weirs and outlet structures to insure that the water being discharged from these disposal areas does not transport pollutants into the surrounding areas. Area F will not required dike construction since the dredged material will be trucked into the area. All of the disposal areas will require the vegetation to be removed or knocked down prior to disposal of the dredged material.

4.03 No change in the future use of areas used for dredged material disposal is anticipated. These areas will remain zoned for commercial and industrial use and are expected to be developed accordingly, as the harbor traffic increases and the local economy expands. Material removed during future maintenance dredging of these reaches of the harbor will continue to be deposited in existing dredged disposal areas.

4.04 Land Use. Few land use changes will result from the installation of the proposed improvement. Parts of the Savannah River and approximately 27 acres of terrestrial land on the northern bank of the river will be converted to channel and channel side slope. The ground elevation of areas used for dredged material disposal will be raised. As stated above, the areas used for dredged material disposal are zoned for commercial and industrial use. Construction of the proposed improvement requires the removal and disposition of approximately 2.95 million cubic yards of material, the equivalent of approximately one-half year of maintenance from the Inner Savannah Harbor. The development of lands adjacent to the harbor as commercial and industrial complexes may accelerate as a result of the proposed action. What changes will take place will depend on the economy, ownership, location and local requirements and controls.

4.05 Economic. The port has always been recognized as the hub of economic activity for Savannah and the surrounding area, local and regional. Any provisions which would improve the port's operating efficiencies and capabilities will insure that the port's role as an employer is preserved and possibly increased.

4.06 Vector Control. It is possible that during the pumping intervals of the project temporary mosquito breeding sites could develop; however, such sites should be minor and the Chatham County Mosquito Control Commission has assured the Corps that it could provide temporary control if such a mosquito problem arises. With final grading and proper drains, the project should result in a reduction of mosquito breeding problems in the area. This is especially true of disposal area C where *Culex quinque-fasciatus* and *Culex salinarius* have been collected. These species are polluted water breeders and have been incriminated as vectors during recent outbreaks of St. Louis Encephalitis in other southern States.

4.07 **Water Quality.** Dredging activities associated with the project should have little, if any, long-term detrimental impact upon the water quality of Savannah Harbor. The environmental aspect of dredging in the proposed project area which may lead to possible ecological damages is the water quality impairment of the surrounding waters during the dredging operation. To evaluate the impact of dredging the impairment of water quality, chemical analyses and the standard elutriate test were made on sediment and water samples collected in the project area (see figure 1, and tables 2 and 3, pages 8, 9 and 10, respectively). According to EPA guidelines, Section 227.13 (Federal Register, Vol. 41, No. 125, June 28, 1976), the District Engineer will compare the concentration of appropriate constituents to applicable narrative and numerical guidance contained in such water quality standards as are applicable by law. The appropriate constituents considered were Hg, Pb, Zn, total Kjeldahl nitrogen, volatile solids and COD. None of the samples taken in the project area failed the elutriate test in Hg, Pb, Zn or nitrogen after an application of a factor of 10 dilution (actual dilution which would occur during the disposal of dredged material at the ocean site would be far in excess of the ten-fold dilution factor employed in the elutriate test). The results of the elutriate test indicated that the discharge of dredged material at the ocean site would not be harmful to man, fish, game, or other beneficial aquatic life. The dredged material will be placed either in diked areas, areas diked along the channel side, or in an EPA approved ocean site. Windom (1972) reported that in sediments to be dredged there exists a large concentration of reduced iron (Fe++). When this iron is dredged and thrown into suspension, it is immediately oxidized, forming iron hydroxide in the marine environment due to the high alkalinity. The iron hydroxide is a colloidal gel capable of scavenging other metals or oil-grease laden particles out of solution and precipitating these metals along with the iron so that they accumulate in the sediments of the disposal area.

4.08 Corresponding changes in water quality during dredging operations cannot be predicted simply on the basis of chemical analyses of the sediments. Research by Skidaway Institute of Oceanography, conducted during 1971 in the Savannah River, showed that values for heavy metals from bottom sediments and amounts of the same elements in the water column during dredging could not be correlated. The paper by Windom (1972) noted that "the quality of the effluent from the weir outlet is essentially identical with that of the river water with the exception that the weir has a slightly higher pH and a considerably higher dissolved oxygen concentration."

4.09 An increase in suspended solids and in turbidity may be encountered in the immediate vicinity of dredging and may persist for a limited period following termination of dredging activities; however, no significant degradation in water quality is anticipated from these increases. Due to current velocities and the rapid flocculation of suspended material, interference with light penetration and productivity will be limited to the time the dredge is operating and for a brief period thereafter. Table 7 shows dredge turbidity measurements taken in the Savannah Harbor. Turbidity measurements reported by the Georgia Department of Natural Resources at U.S. Highway 17 (mile 21.6), which is above the project, and at Fort Jackson (mile 11), are found in table 8.

4.10 **Aesthetics.** The proposed project is not expected to have any long-term adverse visual or aesthetic impacts. During the time maintenance dredging is conducted, it is conceivable that some visual and aesthetic impacts will occur due to the presence of the dredge and pipelines. However, these impacts will be short-term and they could be considered to be a part of the normal activities associated with a working harbor. After the use of these sites is completed, the visual and aesthetic qualities of the area will be the same as they were prior to maintenance dredging. Thus, the areas will

TABLE 7

DREDGE TURBIDITY MEASUREMENTS, SAVANNAH HARBOR, GEORGIA
TURBIDITY IN JACKSON UNITS (JU)
DISTANCE IN FEET BELOW DREDGE

DEPTH OF MEASUREMENT	CUTTERHEAD	50 FT	500'	1000'	1500'	BACKGROUND
		MEASUREMENTS TAKEN 6 MARCH 1974				
3 feet	18 JU	19 JU	18 JU	16 JU	16 JU	17 JU
10 feet	17 JU	19 JU	19 JU	16 JU	16 JU	16 JU

The cutterhead depth was between 35 and 41 feet. Dredge was at mile 9.14.

TABLE 8

TURBIDITY MEASUREMENTS, SAVANNAH RIVER
TURBIDITY IN JACKSON UNITS (JTU)

	U.S. HIGHWAY 17 (mile 21.6)	FORT JACKSON (mile 11)	
DATE	3 foot depth	3 foot depth	20 foot depth
7/2/74	25 JTU	42 JTU	63 JTU
/13/74	25 JTU	25 JTU	32 JTU
9/3/74	16 JTU	13 JTU	10 JTU
11/5/74	11 JTU	16 JTU	18 JTU
12/4/74	28 JTU	28 JTU	84 JTU

(Environmental Protection Division, 1975) not be changed as to the aesthetic qualities. The disposal areas will be aesthetically displeasing during construction, clearing and dredge disposal. Disposal area C will probably be the most noticeable since it is close to a heavily used road. Over a period of time, these areas will revegetate and will be less displeasing.

4.11 *Wildlife Resources.* The wildlife living in the harbor area will be adversely affected by the construction and disposal activities. The wildlife and wildlife habitat found on the 27 acres of land to be removed for widening will be lost. The animals found on the disposal areas will also be destroyed; however, some of the disposal areas will result in more adverse effects than others because of the better wildlife habitat found on them. The larger and more mobile wildlife species will escape into the surrounding areas during the construction and disposal activities. Those displaced animals which survive transition to other suitable areas will place additional stress on the carrying capacity of these areas so that ultimately, the destruction of wildlife habitat will result in a decreased wildlife population. Also, the smaller animals which will be unable to escape the construction activities will be destroyed. After the disposal activities have been completed, the areas will be invaded by successional plant species and as the vegetation becomes established, various species of animals will also invade these areas. Prior to revegetation, the open areas created by disposal are often preferred nesting areas for shore birds.

4.12 *Aquatic Resources.* The destruction of bottom habitats in the dredged area is a distinct environmental aspect of dredging in the proposed project area which may lead to possible ecological damage.

4.13 As the area is initially dredged, and with each successive maintenance dredging, the benthic populations will be significantly disrupted. Many benthic organisms are either killed by the action of the cutterhead or eliminated with the dredged material, while a certain number are suspended in the river and later settle out in adjacent areas or the channel itself. There have been several studies which show benthic recovery to be substantial (Stickney and Perlmutter, 1975), however, there are significant physical and biological differences between the area studied and Savannah Harbor which preclude reliable correlations. None-the-less, it is felt that a certain amount of repopulation will occur in dredged areas. It is extremely doubtful that the reestablished populations will be the same in terms of species' composition as that which presently exists in the undredged bottoms because of several factors including depth and sediment characteristics. The impacts of this aspect of dredging cannot be minimized; therefore, once the decision is made to dredge the area, based upon various other considerations including economic, social, and environmental, these losses are unavoidable.

4.14 The dredging activities anticipated for the proposed project would not have any long-term effects on the ichthyofauna and benthic macroinvertebrates. Stickney (1972) reported that if dredging of the Intracoastal Waterway in Georgia has any effect on the vertebrate and invertebrate organisms captured by otter trawling, his investigations were not able to demonstrate them. Diversity of species was obtained through the utilization of two indices. The data obtained from the diversity indices failed to demonstrate any long-term effects of dredging.

4.15 Each spring and fall, the Front River, Back River, North Channel, South Channel, and the numerous interconnecting tidal streams are hosts to two important anadromous species of commercial and/or sport fishes; namely, shad (*Alosa* spp.) and striped bass (*Morone saxatilis*). Construction and maintenance dredging are not anticipated to have any significant adverse impact upon either the population or spawning habitat of these anadromous species of the Savannah River and its tributaries. Corps personnel have observed spawning migrations while dredging operations were ongoing. Migrating striped bass and shad periodically pass the construction sites when traveling upriver to spawning areas. The harbor width varies from approximately 800 to 1,000 feet, which provides ample swimming area for these anadromous species during dredging operations.

However, the Fish and Wildlife Service and the Environmental Protection Agency have suggested that no dredging work be performed in the channel during the months of February through May so as not to interfere with the spawning migrations. The Corps will restrict its dredging to periods other than February-May.

4.16 *Archeological and Historical.* The National Register of Historic Places has been consulted and Fort Jackson and Fort Pulaski would not be affected by this project. Likewise, the proposed action will not adversely affect any existing, proposed or known potential units of the National Park System or any known historic or natural sites eligible or considered potentially eligible for the National Landmark Program. If any significant archeological or historical remains are located in either the magnetometer or archeological survey, proper steps will be taken to preserve or mitigate these sites. Also, if any significant remains are uncovered during the construction or dredging, proper steps will be taken to mitigate or protect them.

4.17 *Rare and Endangered Species.* Rare and endangered species which occur within the general project area are listed below.

TABLE 9
RARE AND ENDANGERED SPECIES OF SAVANNAH HARBOR AREA

COMMON NAME	SCIENTIFIC NAME
Shortnose Sturgeon	*Acipenser brevirostra*
Brown Pelican	*Pelecanus occidentalis*
Southern Bald Eagle	*Haliaetus leucocephalus*
American Peregrine Falcon	*Falco peregrinus*
Red-cockaded Woodpecker	*Dendrocopus borealis*
American Alligator	*Alligator mississippiens*

None of these species will be affected by the project. No endangered or threatened plant species are known to occur in the project area.

4.18 *Evaluation Pursuant to 404(b) Guidelines:* All discharges of dredged or fill material into waters of the United States at specified disposal sites are required to be evaluated under guidelines developed jointly by the Environmental Protection Agency and the Corps of Engineers pursuant to Section 404(b) of the Federal Water Pollution Control Act. These guidelines were published in Federal Register, Vol. 40, No. 173 dated 5 September 1975 (40 CFR 230).

4.19 The project under consideration will involve Section 404 in several areas. Both disposal areas A and F contain drainage ditches, disposal on which constitutes discharging into waters of the United States Disposal. Areas C and G will be diked and water will be discharged from these areas into waters of the United States via weirs. On this basis, consideration of Section 404(b) guidelines is required. They have been previously addressed elsewhere in this document; however, since they were not discussed specifically in respect to Section 404(b), the following summary evaluation of the project is provided in light of 40 CFR 230.

4.20 *Water Quality Considerations:* In order to evaluate possible water quality impairment, sediment analysis and standard elutriate tests were performed on the material to be dredged. The results of the tests with regard to the constitutents tested indicetes that applicable water quality standards will not be violated.

4.21 *General Consideration and Objectives:* In evaluating whether to permit a proposed discharge of dredged for fill material into waters of the United States, consideration shall be given to the need for the work, the availability of alternative sites and methods of disposal that are less damaging to the environment, and such water quality standards as are appropriate and applicable by law. The following objectives have been considered in evaluating the proposed discharge.

a. Avoid Discharge Activities that Significantly Disrupt the Chemical, Physical and Biological Integrity of the Aquatic Ecosystem, of which Aquatic Biota, the Substrate, and the Normal Fluctuations of Water Level are Integral Components. The only impact to the aquatic ecosystem resultant from disposal on areas C and F will be minor water quality degradation at the point where the weirs release the water which has been decanted from the dredged material. While both areas contain periodic drainage ditches with wetland vegetation found in them and along their banks, they are not a viable part of the aquatic ecosystem. Both these disposal areas will be diked, thus preventing the dredged material from entering, and thereby impacting the aquatic ecosystem. Disposal area G is a terrestrial site to which dredged material will be trucked. Disposal at this site will not impact the aquatic ecosystem.

b. Avoid Discharge Activities that Significantly Disrupt the Food Chain Including Alterations or Decrease in Diversity of Plant and Animal Species. The discharge activities will not significantly disrupt the food chain. The plant and animal diversities within the disposal site will be completely altered. However, this is considered a significant impact in view of the nature of the existing biota at the sites. With time, these areas will undergo succession and eventually reach a point where diversity is at least equal to the existing.

c. Avoid Discharge Activities that Inhibit the Movement of Fauna, Especially their Movement Into and Out of Feeding, Spawning, Breeding and Nursery Areas. The discharges will not inhibit the movement of fauna into or out of any feeding, spawning, breeding, or nursery areas. The work will be restricted from February to May so as not to interfere with striped bass which spawn during these months.

d. Avoid Discharge Activities that will Destroy Wetland Areas Having Significant Functions in Maintenance of Water Quality. The discharge activities will not destroy any wetland areas which have significant functions in maintenance of water quality. The only wetland areas which will be eliminated are the drainage canals located in disposal areas C and F. These canals are mosquito ditches which are in a stagnate condition. The roles in maintenance of water quality are negligible. In fact, disposal area C received untreated domestic sewage for many years. Due to the stagnate condition of the ditches, most of the material dumped has remained, and the area can be classified as grossly polluted. Diking this area and then covering with dredged material can only improve the quality of any water which may exit the area.

e. Recognize that Discharge Activites Might Destroy or Isolate Areas That Serve the Function of Retaining Natural High Water or Flood Waters. No such effects will occur as a result of the proposed work.

f. Minimize Where Practicable Adverse Turbidity Levels Resulting From the Discharge of Material. Since hydraulic dredging results in less turbidity than dragline dredging, it will be utilized where possible. There are some areas in the close proximity to structures where a dragline must be used rather than hydraulic dredge. While turbidity levels will be greater in the immediate areas of the working dragline, it will be localized and will rapidly return to normal upon cessation of dredging.

g. Minimize Discharge Activities That will Degrade Aesthetic Recreational and Economic Values. The proposed work should not adversely affect any of these values.

h. Avoid Degradation of Water Quality: As stated previously, the impacts on water quality will be temporary and applicable standards will not be violated.

Considerations Relating to Degradation of Water Uses at Proposed Disposal Sites.

a. Municipal Water Supply Intakes. There are no water supply intakes located the proximity of the disposal sites.

b. Shellfish. There are no known areas of concentrated shellfish production found near the disposal sites.

c. Fisheries. The dredging and disposal operations have been scheduled so as to restrict activities from the striped bass spawning season (February - May).

d. Wildlife. The selected disposal sites are considered to be optimum with respect to minimizing impacts to wildlife habitat. While the habitat within these areas will be eliminated, the value of the existing habitat is marginal with respect to wildlife. With time these areas will recover.

e. Recreation Activities. The proposed work will not significantly impair aesthetic values, nor will it affect any recreational pursuits.

f. Threatened or Endangered Species. The proposed work will not jeopardize the continued existence of a threatened or endangered species nor will it destroy or modify habitat determined critical in accordance with the Endangered Species Act.

g. Benthic Life. Use of the selected disposal sites will have minimal impacts on benthic populations.

h. Wetlands. As stated previously, the only wetlands that would be lost are those occurring in and on the margin of the drainage ditches in disposal areas C and F. The net losses in terms of wetlands will be minimal.

i. Submersed Vegetation. Anticipated impacts on submersed vegetation are minimal. There are no submerged grassflats located in the project area.

j. Size of Disposal Sites. The selected disposal sites are considered to be the smallest practical size required to accomodate the specified amount of material to be discharged. Disposal sites C and F will be diked in order to assure containment of the dredged material. It will not be necessary to dike area G, since material will be trucked to the site in a partially dewatered state.

5.00 Any Adverse Environmental Effects Which Cannot Be Avoided.

5.01 Water Quality. During dredging activities, increases in suspended solids and turbidity will occur in a very localized area. These changes in water quality will be temporary and will rapidly disappear after termination of the operation. Retention dikes are and will be designed and constructed, where necessary, on the outer perimeter of disposal basins to contain the liquids and solids of shoaling materials. Each ponded area will have adequate surface area and depth to provide time for settlement of solid materials. Effluent from disposal areas will be conveyed from the areas through outlet structures consisting of weirs, drop inlet culverts or rectangular outlet structures, which will be located at such elevations as to minimize flow velocities and assure maximum settlement of solids within the ponded area. When adjustable weirs are used, they will be set at elevations to give sufficient pool capacity to provide an effluent which will meet State water quality standards.

5.02 Land Use. Disposal of the dredged material will completely fill certain portions of the borrow areas for the dikes. The ultimate characteristic of these areas will be a terrestrial land form. The existing vegetation in the disposal areas will be destroyed. The development of lands adjacent to the harbor as commercial and industrial complexes may accelerate as a result of the proposed action.

5.03 Biological Resources. Both localized increase in suspended solids and destruction of sessile populations at the dredging sites are unavoidable. However, the ability for these biotic communities to repopulate, so long as the existing community is healthy and viable, is well documented. The state of health of the existing community is the limiting factor governing the time for recolonization of sessile and detritivore organisms. The "coming back" of macroinvertebrates and fish is directly dependent on recolonization of the above-mentioned lower forms.

5.04 Minor adverse effects on productivity will occur from high turbidity levels in the immediate vicinity of the dredging and disposal areas as the euphotic zone is reduced.

5.05 Any adverse effects on navigation by the larger ships and vessels using the channel will be minimal, based on past maintenance dredging experience. Additional precautions will be required by vessels passing the dredges to avoid accidents or collisions; however, channel widths are generally adequate to preclude any significant hazards to navigation.

6.00 Alternatives to the Proposed Action.

6.01 Alternative Solutions. In order to develop a suitable course of action concerning the feasibility of widening the inner harbor's 400-foot channel, it was necessary to analyze various alternative solutions with regard to their effects on existing conditions. The alternatives selected for consideration include: (1) no development alternative; (2) nonstructural alternative of formally programming traffic movements in the harbor; (3) alternative of constructing a barge lane on the north side of the existing channel; and (4) the recommended plan as discussed in section 1.00.

6.02 The "no development" alternative (Alternative 1) represents the "without project" conditions for the future and would not directly affect the growth of the harbor or potential increases in shipping. The projected growth of the harbor and shipping was based on industrial activity and historical data.

6.03 The continued increase in shipping in the harbor under the "no development" alternative would result in a corresponding increase in congestion and delay. This would result in an excessive rise in shipping costs which would adversely affect shippers and industry utilizing the port. Some industry might seek other ports in an effort to hold down shipping costs. New industry attempting to locate in the area would be discouraged due to the higher shipping costs involved. While most of these impacts would be of a regional nature, the increased delays and shipping costs would have adverse impacts on the national market as well. The rise in the price of the commodities handled in the port would be passed on to consumers throughout the area of distribution, which for Savannah covers much of the Eastern United States and several foreign countries. This increase in the number of vessels calling at the port would create more conflicts in movements and would necessitate more passing situtations. This problem would be compounded by the increasing vessel sizes and as more ships attempted to pass in the harbor, the possibility for a serious accident would greatly increase.

6.04 The social impacts of alternative 1 would be negligible, although there would be some minor long-term adverse impacts on the social well-being of the community due to the increased cost of commodities handled through the port. The impacts on the environment would also be negligible since nothing would be done to change things as they now exist.

6.05 Alternative 2 consists of adopting means whereby traffic movements in the harbor can be rigidly controlled. This alternative would not result in a substantial reduction in the vessel delays currently being experienced. There would be some reductions where actual vessel arrival or departure times coincided with the scheduled times. However, due to the many variables involved in loading, unloading, and vessel transit, exact movement times are nearly impossible to establish. Therefore, delays would be inevitable.

6.06 Economic impacts associated with alternative 2 would be mainly adverse and similar to those of alternative 1. The increasing delays would cause an excessive rise in shipping costs which would adversely affect shippers and industry using the port. The rise in shipping costs would also result in a rise in the price of commodities handled in the port. This rise would be passed on to consumers throughout the tributary area.

6.07 The environmental impacts of this alternative would be negligible since no physical alterations of the harbor would be involved. The social impacts would also be mainly negligible, although there would be some minor adverse impacts associated with the increasing delays and shipping costs.

6.08 Alternative 3 consists of constructing a barge lane adjacent to the north side of the existing navigation channel. To provide this lane, berthing facilities and the harbor line on the north side of the channel would have to be moved back to provide 125 feet (berthing area width) from the edge of the barge lane. This would affect most of the shoreline development on Hutchinson Island. Minimal dredging would be required to actually provide the lane. The main dredging involved would be found in the relocation of the berthing areas where main channel depths would have to be provided to accommodate calling ships.

6.09 The construction of the barge lane would provide for a reduction in the operating cost of barge traffic by allowing them to operate outside of the main ship channel. However, delays to larger vessels would be unaffected since their delays are caused by other large vessels and not by barge traffic.

6.10 There would be some beneficial impacts on barge traffic. However, these would be minor when compared to the continuing adverse conditions for the larger vessels. Those industries utilizing the barge traffic would benefit, while those relying on larger vessels would continue to suffer higher shipping costs and increasing delays.

6.11 A major adverse impact of this alternative on the economy is the construction costs involved. While the cost of the channel dredging would be minimal, the cost of relocations would be high.

6.12 The environmental impacts of alternative 3 would be adverse through generally minor. The dredging activities would temporarily degrade the water quality and destroy the bottom-dwelling biota. The relocation activity would generate temporary adverse noise and aesthetic impacts along with some air pollution. Other adverse impacts would be associated with the disposal of the dredged material. The social impacts of this alternative would be minor though generally adverse.

6.13 Possible Disposal Areas. Possible sites were analyzed to determine their feasibility for use as disposal sites. The areas shown on plate 2 represent the various areas considered for material disposal. Except for the ocean disposal site, the areas are not currently being used for disposal and they are not scheduled for use as maintenance disposal areas. These areas and a brief description of each are as follows.

6.14 The ocean disposal area is located on the southeast side of the Savannah River Bar Channel at latitude 31° 57'55"N and longitude 80° 46'48"W. This site was approved by the Environmental Protection Agency for dredge disposal and was listed in the Federal Register, Volume 38, 15 October 1973. The disposal area is 2 nautical miles wide by two nautical miles long and varies in depth from 20 to 36 feet. The bottom is composed of sand with some shell and silt. Some of the benthic organisms found in the area include sea urchins, *Diapatra* sp. worms and *Penna* sp. shells.

6.15 Another possible disposal site is located on Tybee Island at Savannah Beach. A beach restoration project has been conducted on this beach and periodic nourishment is required. Analysis of hydrographic surveys of the waters surrounding Savannah Beach indicates that the waters are too shallow for material placements by barges to be practical. Therefore, the material would have to be pumped ashore by a pump-out barge or brought in by truck.

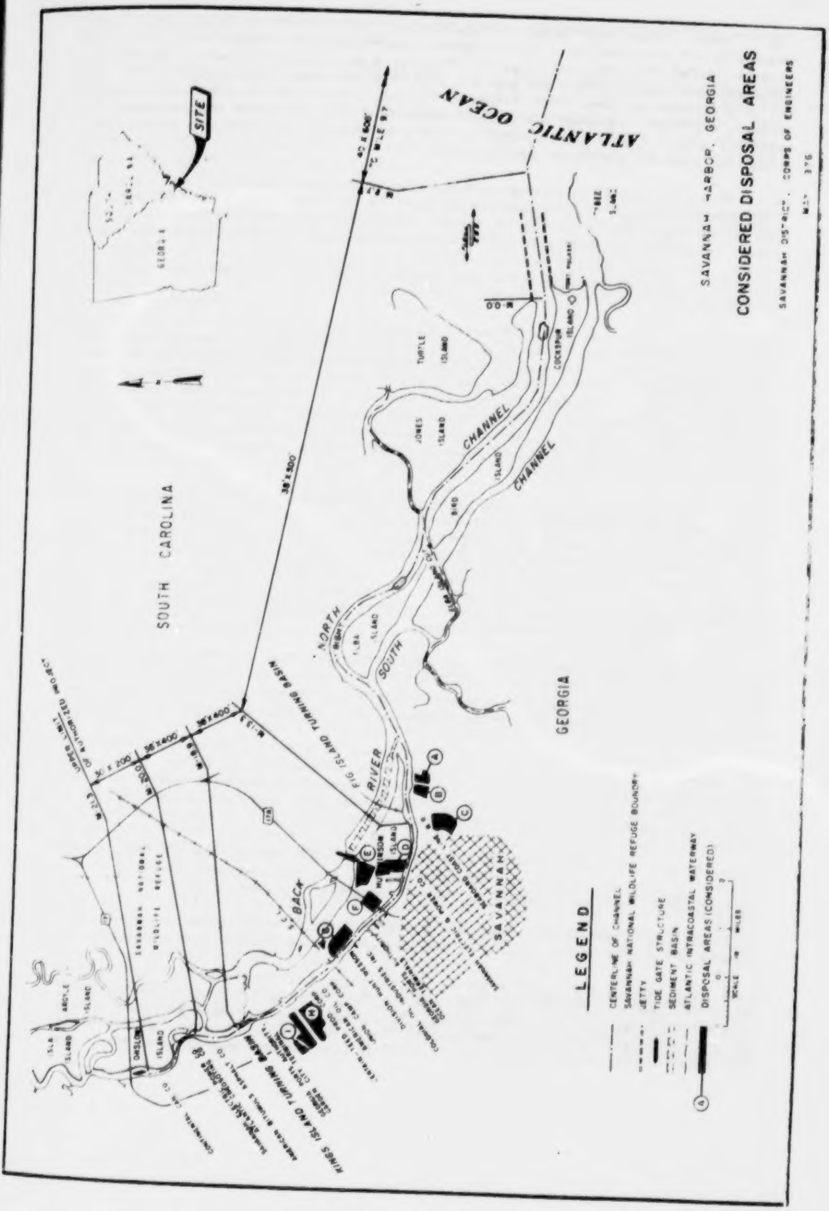
6.16 Area A (30 acres) and Area B (40 acres) are located on a small canal on the southern bank of the river between Flinkote Company and the East Coast Terminals (approximately one-half mile east of the Fig Island Turning Basin). The area adjacent to the canal is a sawgrass marsh surrounded by small trees, shrubs and herbaceous plants. Some common plants in this area are groundsel tree, bayberry, cattail, pickerelweed, arrowhead, honeysuckle and willow. The area also has good wildlife habitat. Since this area does contain productive marshland and since other disposal areas are available, areas A and B were eliminated from further consideration.

6.17 Area C (140 acres) lies approximately one-half mile south of Fig Island Turning Basin. It is bordered by President Street on the north, Savannah Golf Club on the east, Hillcrest Cemetery, a school, and a residential area on the south, and railroad tracks on the west. There are several major sewer lines that cross the area to reach a treatment plant north of President Street. Because of past disturbance, the area is vegetated with an early successional forest interspersed with open areas of herbaceous plants. Trees common to the area include popcorn tree, chinaberry, sycamore and willow. Other common plants include grasses, sedges, horsetail, ironweed, ragweed, brownsedge, bayberry and groundsel tree. The drainage ditches that cross the area have aquatic species such as cattail, alligator weed, duckweed, arrowhead and pickerelweed. The area has fair wildlife habitat for small animals but it suffers from municipal pollution and is a breeding area for mosquitoes.

6.18 Area D (45 acres) consists of two abandoned slips and the area surrounding them. These are located on Hutchinson Island on the north bank of the river just east of Georgia Kaolin. These slips are filled with silt up to just about the low waterline and have patches of sawgrass and pickerelweed scattered in the shallower areas. The area surrounding the slips is covered by mixed shrubs, herbs, and small trees, with such species as bayberry, groundsel tree, popcorn tree, trumpet vine, rattlebox, horsetail, asters, various grasses and clover. This area has fairly good wildlife habitat for various species of animals.

6.19 Area E (122 acres) is located on Hutchinson Island approximately three-quarters of a mile north of Georgia Kaolin adjacent to the Back River and the tide gate road. This area has been used for disposal in the past and is currently under cultivation. This land belongs to SCL Railroad, but is leased to private farmers and is currently growing corn and wheat. The wildlife habitat associated with this site is around the edges and in the drainage ditches where the wildlife has cover available year-round.

6.20 Area F (80 acres) is located under and adjacent to the Talmadge Bridge on Hutchinson Island. The area is bounded by the river on the south, by an old dike on the west, by railroads to the north, and industrial property to the east. The area is crossed by several roads and railroads. It was used about 15 years ago as a disposal site and has since revegetated. It is currently covered in shrubs, herbs, vines and



SAVANNAH HARBOR, GEORGIA

CONSIDERED DISPOSAL AREAS

SAVANNAH DISTRICT, CORPS OF ENGINEERS

MAY 1976

PLATE 2

small trees. The dominant trees include popcorn tree and willow with a few large sycamores and chinaberries. Other common plants include trumpet vine, Virginia creeper, elderberry, mulberry, dogwood, groundsel tree, bayberry, sumac, horsetail, ironweed, and various sedges and grasses. The area has a small drainage ditch near the river side which has some tidal influence. In this area can be found cattail, cutgrass dodder, smartweed, arrowhead and pickerelweed with a few cypresses and buttonbushes near the edges. The wildlife habitat in this area is quite diverse and provides good cover for numerous species of small animals.

6.21 Area G (89 acres) is located on Hutchinson Island approximately 1 mile west of the Talmadge Bridge. It is bounded on the south by the river, on the west and north by the SCL Railroad, and on the east by other underdeveloped property. The area was recently used as a disposal site and it is presently covered with herbs and some small shrubs. The common species include willow, groundsel tree, bayberry, rattlebox, ragweed, horesetail, ironweed and various sedges and grasses. This area provides very limited wildlife habitat.

6.22 Areas H (68 acres) and I (65 acres) are upland areas located along the Dundee Canal which empties into the Savannah River on the southern bank across from the Marsh Island Turning Basin. This area is bounded by the National Gypsum Company on the west, industrial development on the east, and State Route 21 on the south. The area is crossed by several railroads and consists mainly of a mixed oak-pine forest with dominant species being loblolly pine, water oak, sweetgum, live oak, and hickories. Ground cover is limited mainly to the edges and includes greenbrier, grapevine and various herbaceous plants and small tree saplings. There is good wildlife habitat associated with these areas.

6.23 Alternative Analysis. The proposed plan was derived in accordance with guidelines presented by the Water Resources Council (Federal Register, 10 September 1973, Volume 38, No. 174, Pt. 3). The National Economic Development Plan (NED), as described in this record, includes those project items which would provide the most economical navigation improvement for Savannah Harbor while minimizing the costs for disposal of dredged materials. The Environmental Quality Plan (EQ) includes the same navigation improvement as the NED Plan, but modifies the disposal plan to maximize the enhancement of the environment.

6.24 National Economic Development Plan (NED). The NED Plan provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island Turning Basin to the Kings Island Turning Basin. This widening would be accomplished using a pipeline dredge and a dragline and placing the dredged material in disposal areas E, F, G and H.

6.25 The main economic effects of the NED Plan are related to the costs associated with construction and the benefits associated with reduced shipping delays. Since the NED Plan was developed to produce the maximum excess of benefits over costs, it provides the greatest return for each dollar spent. This is evidenced by a benefit-to-cost (B/C) ratio of approximately 2.7 to 1.

6.26 The main environmental effects of the NED Plan would result from the dredging and disposal of material. The actual dredging activity and the subsequent disposal of the material have significant impacts on the environment of the study area.

6.27 The significant social effects of the NED Plan would result from the beneficial impacts of the plan on the economy of the area or from the construction activity.

6.28 Environmental Quality Plan (EQ). The EQ Plan provides for widening Savannah Harbor from 400 feet to 500 feet wide from the Fig Island Turning Basin to the Kings Island Turning Basin. This widening would be accomplished by using a pipeline dredge and a bucket dredge and placing the material in the ocean disposal site, at the beach nournishment site, and in area C. Also, to avoid any possible adverse effects on the shad and striped bass spawning migration in the harbor area, dredging activities would be halted during February through May.

6.29 The main economic effects of the EQ Plan are related to the costs associated with construction and the benefits associated with reduced shipping delays. Since the EQ Plan was developed to maximize the enhancement of the environment, more emphasis was placed on the attainment of intangible values rather than economic optimization. Therefore, this plan represents a more costly plan than does the NED Plan as illustrated by the B/C ratio of 1.3 to 1.

6.30 The main environmental effects of the EQ Plan would result from the dredging and disposal of material. The actual dredging activity and the subsequent disposal of the material would have significant impacts on the environment of the study area.

6.31 The significant social effects of the EQ Plan would result from the beneficial impacts of the plan on the economy of the area or from the construction activity and disposal of material.

6.32 Selecting a Plan. Four possible solutions were initially considered in the development of plans to address the problems and needs of the study area. Of the possible solutions, the plan of widening Savannah Harbor was selected as the most responsive to the problems and needs. This plan was then analyzed to develop a plan that maximizes National Economic Development (NED) and a plan that maximizes the enhancement of Environmental Quality (EQ) using the widening as a base condition. The NED Plan represents the most economic means of widening the harbor; however, the plan does fail to make any beneficial contribution to the enhancement of the environment.

Also, while the EQ Plan does make beneficial contributions to the enhancement of the environment, it does so at the significant expense of the NED account. Therefore, the recommended plan discusssed in section 1.00 represents the trade-off between the NED and EQ Plans in order to develop a plan that makes beneficial contributions to the enhancement of the environment, but maintains its economic efficiency.

7.00 The Relationship Between Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity. The proposed plan will allow and facilitate industrial expansion in the Savannah area. The environmental quality of the Savannah area will be temporarily degraded (see sections 4.00 and 5.00). No significant adverse effects are anticipated during the life of the proposed project. The areas proposed for disposal of material resulting from construction dredging do not appear to present any significant damage to the environment. Maintenance dredging of the widening would not add significantly to the overall total existing maintenance dredging requirements of the harbor project.

7.01 A spin-off effect of dredging associated with increased turbidity levels is the release and redistribution of nutrients contained in the bottom silts. As a naturally occurring phenomenon of shallow estuaries, wind-induced turbidities play a major role in the productivity of those water bodies by nutrient distribution of shoreline marsh areas. This is nature's way of sustaining habitat productivity.

7.02 The short-term use of the proposed work is of economic significance from regional, national and even international standpoints because of the increased shipping usage afforded by completion of the project. Significant economic benefits will accrue from the proposed project to offset the adverse effects on the biota caused by the construction of the turning basins and the new disposal areas.

8.00 Any Irreversible and Irretrievable Commitments of Resources Which Would be Involved in the Proposed Action Should it be Implemented. The major irretrievable commitment of natural resources required by the proposed action will be the conversion of approximately 27 acres of terrestrial land and its associated industrial usage on the northern bank of the Savannah River to aquatic environment. The proposed project requires the destruction of portions of the benthic biota that now exists. Although these organism are irretrievable, it is believed that communities are retrievable. Labor and material required for the initial project and future maintenance are also irretrievable.

9.00 Coordination and Comment and Response.

9.01 Pursuant to provisions of the National Environmental Policy Act of 1969 (Public Law 91-190), coordination has been effected with agencies which are authorized to develop and/or enforce environmental standards to obtain a current assessment of the environmental impact of the proposed plan. Interested citizen groups were also invited to comment on the environmental impacts involved in implementing the project.

9.02 Public Participation. An initial public meeting was held on 25 July 1970. A formulations stage meeting was held on 13 March 1974 to present the District Engineer's preliminary findings concerning the preliminary studies, including the advantages and disadvantages of the various alternatives, and to obtain interested persons' views and desires concerning these alternatives. These meetings assisted in gaining information to formulate a sound detailed plan which meets local interests' desires and needs within the scope of this authorized study. Finally, a late stage public meeting was held in May 1976 in order to present the plan to local interests and to obtain their views, which were generally favorable to the plan.

9.03 The Draft Environmental Statement was sent to the following Governmental agencies and citizen organizations requesting their views and comments. The comments which were received are included in this section with responses to those comments (copies of the original letters are included in appendix D.). Those who did not respond in the 45 day waiting period were assumed to have no comments on the project.

Georgia Office of Planning and Budget
Georgia Ports Authority
County Commissioners, Chatham County, Georgia
City of Savannah, Georgia
U.S. Department of Commerce
National Marine Fisheries Service
U.S. Environmental Protection Agency
U.S. Department of the Interior
U.S. Coast Guard
U.S. Department of Health, Education and Welfare
U.S. Department of Housing and Urban Development
Georgia Conservancy
Ogeechee Audubon Society

9.04 Releases were furnished to the news media indicating that copies of the Draft Environmental Statement were available for review upon request.

9.05 U.S. Environmental Protection Agency. In a letter dated 23 July 1976, the Environmental Protection Agency furnished the following comments on the Draft Environmental Statement.

9.06 Comment: In the discussion on pages 3 through 5 of the proposed disposal plan and disposal areas, little description or discussion is presented for sites A, B or C, and as can be seen from table 1, site C is one of the larger areas.

9.07 Response: This discussion has been added to Section 6.00 of the Revised Draft Environmental Statement and table 1 has been deleted.

9.08 Comment: Area C is described as a low-lying area that suffers from municipal pollution and mosquito infection. The area poses a health hazard and potential source of encephalitis. However, information is lacking on whether the area contains tidal marsh, and if so, how many acres or what other biotic communities may be present at the site. This information is needed to give a proper evaluation of dredging and disposal.

9.09 Response: This area has no tidal marsh. It does have limited tidal influence, but the canal in the area has tidal gates with the result that the water in the canal is stagnant. More discussion on this area has been added to section 6.00 of the Revised Draft Statement.

9.10 Comment: In addition, a better description of the 27 acres of land lost along the northern bank to channel widening is necessary to properly evaluate this phase of the project. Is all of the site already bulkheaded and is some marsh involved in the dredging of this area? Furthermore, a better description of spoil areas D, E, F, G, H, and I would be helpful.

9.11 Response: Better descriptions of the disposal areas and the 27 acres have been added to the final statement. No salt marsh will be lost due to the recommended plan. Most of the area has been extensively disturbed; however, the complete area is not bulkheaded.

9.12 Comment: The evaluation of possible effects upon the benthic community should be strengthened. We note two papers are cited that deal with recolonization and dredging effects of the benthic community, which is supportive that dredging has no serious effects on the benthic community. However, if one reads the completed papers and looks at sampling methods and data analysis, it is understandable how one could reach such conclusion.

In the first paper by Stickney and Perlmutter (1975), the author conducted a study of dredging effects on a mud-bottom area in which they sampled with a Ponar dredge sampler and collected replicate hauls. It should be injected here that this type of bottom generally does not support a diverse fauna, especially when the sediments are highly organic and dissolved oxygen is low. Sediment analyses revealed high organics at both stations, and no dissolved oxygen data are presented, nor are any depths given for these stations. Usually the major constituent in mud and silt bottom benthic community is the polychaete worms which is indicated to be the case at both stations. Based upon results from diversity indices, it is concluded that dredging has no serious effects on the benthic community, but the fact remains that inhabitants of a mud and silt bottom are generally tolerant, so it is understandable why recovery of such an area would be rapid. However, it should be pointed out that it is improbable that the whole area in the vicinity of the project is a mud and silt bottom.

The other publication, Stickney (1972), is cited ... to back up the statement that "dredging activities would not have any long-term effects on the ichthyofauna and benthic macroinvertebrates." Stickney concludes that according to his otter trawl samples, dredging has no effect on the vertebrate and invertebrate organisms. However, the primary misconception in this investigation is the use of otter trawl samples to evaluate the benthic macroinvertebrate population. A 10-minute nonduplicated otter trawl was the method utilized at each station, and no quantitative methods were applied.

9.13 Response: Concur that perhaps the comparison of Drs. Stickney and Perlmutter's research results with the conditions in Savannah Harbor that would result from the proposed improvement may be speculative. However, it appears that the benthos are displaced during dredging, since representatives of the benthic community are not able to avoid the dredge by moving to an unaffected area, organisms readily reestablish themselves along the newly-created bottom following passage of the dredge. Therefore, populations of benthos will decline in the immediate vicinity. However, the reduction is not expected to alter the food webs or chains to any significant degree. Reestablishment of the existing benthic community is predicted relatively soon after cessation of dredging. Many of the benthic organisms are suspended into the water column due to turbulence associated with passage of the dredge. Suspended organisms may be carried by currents and eventually settle out onto the substrate, often in an area already dredged. Natural sloping of the sides always occurs to some extent after dredging, and such sloping would provide a second means by which the benthic community could become established since the mud entering the channel could carry included-benthos with it. Because of the fact that there appears to be no time when benthos is completely absent from the dredged area (except instantaneously at the exact site of cutterhead), it is likely that suspension and rapid resettlement of the community will occur. The total area under disruption is very small compared to the surrounding estuarine area. There exists considerable substrate adjacent to the channel where relatively large populations of infauna are present which will not be significantly disturbed. Thus, there is an abundant source of organisms available to recolonize dredged areas.

A study in Chesapeake Bay indicated that population diversity in a dredged channel remained lower, but in the same order of magnitude as before 1-1/2 years after dredging. However, the channel area did not recover in diversity.

During a study of animal-sediment relationships at a dredging and dredged material disposal site in the lower Chesapeake Bay, Harrison Lynch and Altschaeffl (1964) found that resettlement occurred very rapidly in the dredged areas by active migration and hydrodynamic distribution of juveniles. Seasonal variations in the populations of juveniles tended to mask true distribution patterns. Although species numbers were relatively constant from season to season at each sampling station, the species composition varied markedly from season to season at each station. The fact that large numbers of species were found only once as compared to those found on two or three sampling dates at the same station was thought to be indicative of seasonable variability of species or the transitory nature of species occurrences rather than to dredging and dredged material disposal effects. Not only is it expected that resettlement in Savannah Harbor waters will occur by active migration and hydrodynamic distribution, but also due to some sloughing off of adjacent channel.

9.14 Comment: In view of the foregoing, we have rated ER- (environmental reservations) to certain aspects of the project and 2 (insufficient information) to the Impact Statement.

9.15 Response: Noted.

9.16 Federal Energy Administration. In a letter dated 28 June 1976, the Federal Energy Administration furnished the following comment on the Draft Environmental Statement.

9.17 Comment: Our examination of the EIS and the accompanying feasibility report did not uncover any discrepancy with FEA mission areas. Moreover, the improvement of harbor conditions under which such commodities as gasoline, distillate fuel oil, residual oil and crude oil are shipped is in keeping with FEA's desire to bring more efficient and equitable distribution of energy supplies to all parts of the Nation.

9.18 Response: No response required.

9.19 U.S. Department of Health, Education and Welfare. In a letter dated 15 June 1976, the Department of Health, Education and Welfare furnished the following comment on the Draft Environmental Statement.

9.20 Comment: We have reviewed the subject Draft Environmental Statement. Based upon the data contained in the draft, it is our opinion that the proposed action will have only a minor impact upon the human environment within the scope of this Department's review. The impact statement has been adequately addressed for our comments.

9.21 Response: No response required.

9.22 U.S. Department of Housing and Urban Development. In a letter dated 29 June 1976, the Department of Housing and Urban Development furnished the following comment on the Draft Environmental Statement.

9.23 Comment: We have reviewed the Draft EIS for the above-captioned project and have no specific comments to offer. We feel the Statement adequately addressed all concerns within our area of expertise.

Thank you for the opportunity to comment on the Draft EIS. We would appreciate receiving a copy of the Final Statement when it is published.

9.24 Response: Noted.

9.25 U.S. Department of the Interior. In a letter dated 1 July 1976, the Department of the Interior furnished the following comments on the Draft Environmental Statement.

9.26 Comment: We noted that discussion of cultural resources and onsite surveys is based upon data accumulated as a result of investigations of other proposed projects. The final statement should contain evidence of consultation with the State Historic Preservation Officer. That office should be able to provide data on any cultural resources in the area of the proposal's potential impacts, that are presently in the process of nomination to the National Registry of Historic Places. This consultation has evidently been omitted in the draft statement.

9.27 Response: Mr. David Sherman, the State Historic Preservation Officer for Georgia, was contacted and a copy of his letter is included in appendix D. This project is consistent with the goals and policies of that office and there will be no historical sites affected by the project.

9.28 Comment: The statement adequately addresses fish and wildlife aspects of the project, with the exception of the items outlined below.

9.29 Response: Noted.

9.30 Comment: Paragraph 1.06. The location and characteristics of ocean disposal site O and the biological aspects of ocean spoil deposition should be discussed.

9.31 Response: The location of the ocean disposal site has been added to plate 2 and a description has been added to section 6.00 in the Revised Draft Environmental Statement.

9.32 Comment: Paragraph 1.07. Disposal areas A, B, and C should be described in this paragraph, since they are listed in table 1 and mentioned in paragraph 6.06.

Spoil disposal area f is improperly described. Most of this area is densely wooded with mixed deciduous trees.

9.33 Response: Table 1 has been deleted and these disposal areas have been described more fully in Section 6.00 of the revised Draft Environmental Statement.

9.34 Comment: Paragraph 2.59. This section should be expanded to provide information on the scope of the survey conducted by the Institute of Archeology and Anthropology of the University of South Carolina.

If that survey failed to investigate the lower Savannah area in the State of Georgia, it is incumbent upon the Federal agency to initiate adequate surveys and provide information on the results.

9.35 Response: An archeological investigation is scheduled to be done by the University of South Caroline beginning in August 1976 to survey the lands affected by the project. Also, a magnetometer survey will be conducted on the water portion of the project area during the Phase I Advanced Engineering and Design.

9.36 Comment: Paragraph 4.04. Disposal area F is described improperly. (See comments above.)

9.37 Response: Disposal area F has been more correctly described in Section 6.00 of the Revised Draft Statement.

9.38 Comment: Paragraph 4.12. The effects of spoil deposition with regard to terrestrial wildlife should be discussed further. Spoil areas F, H, and I are isolated pockets of high value wildlife habitat located in a highly industrialized area. Those displaced mammals, reptiles and amphibians which survive transition to another suitable habitat will place additional strains on the carrying capacity of that habitat, so that ultimately, the destruction of wildlife habitat results in decreased wildlife populations.

9.39 Response: This paragraph has been rewritten in the Revised Draft Statement to include this information.

9.40 Comment: Paragraph 4.14. We believe that study by Stickney and Perlmutter to be an inappropriate reference for predicting benthic recovery following harbor widening. This study was geographically specific and although there are similarities between Savannah Harbor and the study area, the assumptions made in paragraph 4.14 are speculative. While the referenced study dealt with maintenance dredging in 12-foot depths, this environmental report pertains to dredging which will expose a new bottom at 38 to 40 feet. Furthermore, the Stickney and Perlmutter investigation involved only one study site and one control site. Throughout the 2-year study, samples varied greatly at both sites as to species diversity and numbers of individual organisms. Because of this inconsistent data and the limited scope of the study, any conclusions drawn from the investigation should be qualified. Finally, the statement regarding diversity values is misquoted.

9.41 Response: See Response 9.13.

9.42 Comment: Paragraph 6.04. The alternative of using suitable dredged material for beach nourishment on Savannah Beach should be discussed. An explanation of why disposal sites A, B, C, D and E were selected for the environmental quality plan, but were not selected for the proposed plan is also necessary.

9.43 Response: The EQ Plan has been rewritten in the Revised Draft Statement.

9.44 Comment: Appendix C-1. Wood duck is notably absent from this list.

9.45 Response: This has been added to the Revised Draft Environmental Statement.

9.46 U.S. Department of Commerce, National Marine Fisheries Service. In a letter dated 15 July 1976, the National Marine Fisheries Service furnished the following comment on the Draft Environmental Statement.

9.47 Comment: Paragraph 2.40. This paragraph states that, "Juncus roemerianus is considered to be the least important of the common marsh grasses." We suggest that this sentence be reworded to state that Juncus roemarianus is considered to be less productive than Spartina alterniflora.

9.48 Response: Corrections have been made in the Revised Draft Environmental Statement to reflect this comment.

9.49 Comment: Paragraph 2.44. The blueback herring (*Alosa aestivalis*) should be added to the list of anadromous fishes contained in this paragraph. (See appendix C, page C-5.)

9.50 Response: See Response 9.48 above.

9.51 Georgia State Clearinghouse, Office of Planning and Budget. In a letter dated 16 July 1976, the Office of Planning and Budget of the State of Georgia furnished the following comments on the Draft Environmental Statement.

9.52 Comment: The Marshland Protection Section of the Game and Fish Division, DNR, is particularly concerned by the continued widening and deepening of the Savannah Harbor and with the magnitude of dredging and spoil deposition associated with the maintenance of the harbor. This cannot avoid having a long-term, increasingly detrimental effect on the marshlands and other environmental resources of the area.

9.53 Response: True, the long-term cumulative effect of all the projects dealing with the Savannah Harbor will be detrimental to the environment. However, if the port is to be maintained at its current status or increased to accommodate the growing commerce in the area, then certain trade-offs will have to be accepted and worked out so that each project in the Savannah Harbor will have the least adverse environmental impacts. It is felt that this widening project was adequately evaluated environmentally and the best alternative was chosen.

9.54 Comment: This project creates 27 additional acres of river channel bottom to be maintained. There appears to be an assumption on the part of the Corps that no additional sediment will accumulate as a result from the transport of materials from ocean bottoms, into the harbor and this factor is not taken into account. The Corps also does not appear to take into account the slumping of the side slopes of the new channel.

9.55 Response: Shoaling in the Savannah Harbor is mainly a result of sediments being deposited by incoming tides, by flows down the Savannah River and by flows from the surrounding area. The amounts of sediments deposited remain fairly constant from year to year because the amount of sediments carried by these flows is fairly constant. The increasing of the size of the harbor will not significantly change these flows or the amount of sediment deposited. Also, there should be only limited slumping of the side slopes since the new channel will be made of a high quality sand, sloped in the proportions to resist side slumping.

9.56 Comment: The Marshlands Protection Section of the Game and Fish Division is opposed to the continued building of high ground in former marsh and estuarine areas by spoil deposition, and therefore encourages the Corps to find alternative uses for dredge spoil. Georgia's water quality and air quality standards must be adhered to where applicable.

9.57 Response: Noted. The alternatives for this project were selected on both environmental and economic parameters. Alternative disposal areas A and B were disqualified because they were marsh areas and areas H and I were disqualified because they were mature forest. The disposal areas selected for the recommended plan are all areas which have early stage succession plant growth and all of which have been previously disturbed, and all but area C have been previously used as disposal areas. Also, all environmental standards will be followed where they are applicable.

9.58 Comment: On page three, paragraph 106, the Corps proposes to use a bucket dredge and barge for dredging and disposal. Because of the tremendous volume of silt, heavy metals and other potentially biologically deleterious substance to be stirred up, we are concerned about the possible impact on adjacent floral and faunal communities. It seems probable that the massive quantities of silt created by this type of operation will have significant adverse effects on estuarine or benthic biota. Although organisms native to Savannah Harbor have evolved under conditions of high silt transport and can be expected to withstand or recolonize after periods of inordinately high siltation, this recolonization is impeded by a less than optimum substrate in which organisms might find attachment. The dredging operation, while removing large particulate from the bottom, resuspend fine particles to settle elsewhere. The "fines" impede the respiration of various estuarine organisms as well as create substrate which is often unsuitable for attachment of many benthic species. In view of these factors, we recommend that the Corps strongly consider using a hydraulic dredge with cutter head instead of the proposed bucket dredge. This would considerably reduce the adverse impacts which are of concern to the State. Approval must be obtained from the Maintenance Engineer of the Georgia Department of Transportation before any earthwork is accomplished in the vicinity of the foundation of the Talmadge Memorial Bridge.

9.59 Response: Ecological perturbation caused by chemical-biological interactive effects resulting from discharges of dredged or fill material has been studied by Environmental Engineering Program, University of Southern California, Los Angeles, California, funded by the Corps of Engineers. The results appear in a report entitled "Research Study on the Effect of Dispersion, Settling and Resedimentation on Migration of Chemical Constituents During Open-water Disposal of Dredged Materials" prepared for Environmental Effects Laboratory, U.S. Army Engineer Waterways Experiment Station (Final Report - Contract No. DACW 39-74-C-0077 (DMRP Work Unit 1C06), February 1976). The results show that concerns regarding the release of a significant quantity of toxic materials into solution during dredging operations and disposal are unfounded. The data from the study indicates that while some trace metals may be released in the ppb range, others show essentially no release pattern. Most of the concentrations in soluble phase are well below the allowable concentration levels of the ocean water discharge standards.

This paragraph has been rewritten in the Revised Draft Statement. The area from the Engineer Yard to the Talmadge Bridge will require drag lining due to the large quantity of pilings and debris in this area. There will be a total of about 1 million cubic yards of dredged material removed. The area below the Engineer Yard and above the Talmadge Bridge will be done with a hydraulic dredge and pipeline and will require the removal of around 2 million cubic yards of material.

The Maintenance Engineer of the Georgia Department of Transportion will be contacted and approval will be obtained during the plans and specifications for construction in the advanced engineering and design phase.

9.60 Revised Draft Environmental Statement. On 6 September 1977, the Revised Draft Environmental Statement was furnished to Federal and State agencies as well as other interested parties. Comments and suggestions on the revised draft were received from the following agencies or organizations:

U.S. Department of the Interior
U.S. Environmental Protection Agency
U.S. Department of Commerce, National
Oceanic and Atmospheric Administration

9.61 As a result of the suggestions and comments received, some revisions have been made to the Environmental Statement. These comments are discussed below and copies of the correspondence are included in appendix E.

9.62 United States Department of the Interior (USDI), Office of the Secretary. In letter dated 1 December 1977, the U.S.D.I furnished the following comments on the Revised Draft Environmental Statement.

9.63 Comment: With the exception of the specific items discussed below, the revised draft environmental statement satisfactorily addresses our comments on the earlier draft statement.

9.64 Response: Comment is noted.

9.65 Comment: Page 2, paragraph 1.04 - The geographic limits of reaches 1 through 5 should be delineated here and on plate 1.

9.66 Response: The geographical limits of each reach have been added to the text. They have been sufficiently delineated to allow easy location on plate 1.

9.67 Comment: Page 25, paragraph 4.13 - The Department, in a July 1, 1976, letter concerning the draft statement, commented on what it believes to be an inappropriate reference for predicting recovery and recolonization of benthic populations following channel enlargement; that is, *Impact of Intracoastal Waterway Maintenance Dredging on a Mud Bottom Benthos Community*, by Stickney and Perlmutter, 1975. Our opinion is based on the limited scope of the study, the variability of the data, site specificity, and other major differences in conditions between the Savannah Harbor Site and the Stickney-Perlmutter study site. Furthermore, Stickney and Perlmutter were misquoted as stating that post dredging diversity values "...are higher than those observed before dredging occurs." The Environmental Protection Agency, in their 23 July 1976 comments on the draft statement, also expressed concern over the use of this reference. We note that this section in the revised draft statement remains unchanged from the original draft. The response to the Environmental Protection Agency's comment (page 37, paragraph 9.13) does not alleviate our objection to the use of the Stickney-Perlmutter study.

9.68 Response: While we believe that the referenced study is useful as a means of showing that benthic repopulations can occur under certain conditions and those probable mechanisms whereby this repopulation is accomplished, we agree that, because of differences between the nature of the project studied and the nature of the proposed widening of Savannah Harbor, the referenced study cannot be cited as a basis for predicting near equal benthic repopulation. This portion of the Environmental Statement has been appropriately revised.

9.69 United States Environmental Protection Agency (EPA), Region IV. In letter dated 14 November 1977, the EPA furnished the following comment on the Revised Draft Environmental Statement.

9.70 Comment: We have reviewed the revised Draft Environmental Impact statement on the channel widening of Savannah Harbor. This statement responded satisfactorily to our previous comments and, as such, we have rated it LO, lack of significant environmental objections, and 1, no further information is requested.

9.71 Response: Comment is noted.

9.72 United States Department of Commerce, National Oceanic and Atmospheric Administration (NOAA). In letter dated 23 November 1977, NOAA furnished the following comments on the Revised Draft Environmental Statement.

9.73 Comment: The subject statement has been reviewed within the areas of NOS responsibility and expertise, and in terms of the impact of the proposed action on NOS activities and projects.

9.74 Response: Comment is noted.

9.75 Comment: On page 7, paragraph 2.15, data on hydrology agree with our tide table information with the exception of the 7.9 feet average at mile 21.3. This should be 7.0 feet.

9.76 Response: Agree, this section has been revised accordingly.

9.77 Comment: Geodetic control survey monuments may be located in the proposed project area. If there is any planned activity which will disturb or destroy these monuments, NOS requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS mounuments.

9.78 Response: No geodetic control survey monument will be disturbed or destroyed by the proposed work.

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APPENDIX A

STATE OF GEORGIA WATER QUALITY CRITERIA

APPENDIX A

The State of Georgia, Department of Natural Resources, has determined that the following criteria are required for the specific water usage:

(1) Drinking Waters Supplies -

(a) Those waters approved by the Georgia Department of Public Health and requiring only approved disinfection and meeting the requirements of the latest edition of "Public Health Service Drinking Waters Standards;" or waters approved by the Georgia Department of Public Health for human consumption and food processing or for any other use requiring water of a lower quality.

1. Bacteria: Fecal coliform not to exceed a geometric mean of 50 per 100 ml based on at least four samples taken over a 30-day period and not to exceed 200 per 100 ml in more than 5 percent of the samples in any 90-day period.

2. Floating solids, settleable solids, sludge deposits or any taste, odor, or color-producing substances: None associated with any waste discharge.

3. Sewage, industrial, or other wastes: None.

(b) Those raw water supplies requiring approved treatment to meet the requirements of the Georgia Department of Public Health and the latest edition of "Public Health Service Drinking Water Standards" or which are approved by the Georgia Department of Public Health for human consumption and food processing; or for any other use requiring water of a lower quality.

1. Bacteria: Fecal coliform not to exceed a geometic mean of 1,000 per 100 ml based on at least four samples taken over a 30-day period and not to exceed a maximum of 4,000 per 100 ml.

2. Dissolved Oxygen: A daily average of 6.0 mg/l and no less than 5.0 mg/l at all times for waters designated as trout streams by the State Game and Fish Commission. A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times for waters supporting warm water species of fish.

3. pH: Within the range of 6.0 - 8.5.

4. No material or substance in such concentration that, after treatment, would exceed the requirements of the Georgia Department of Public Health and the latest edition of "Public Health Service Drinking Water Standards."

5. Temperature: Not to exceed 90 degrees F. At no time is the temperature of the receiving waters to be increased more than 5 degrees F. above intake temperature except that in estuarine waters the increase will not be more than 1.5 degrees F. In streams designated as trout or smallmouth bass waters by the State Game and Fish Commission, there shall be no elevation or depression of natural stream temperatures.

(2) Recreation -

General recreational activities such as waterskiing, boating, and swimming, or for any other use requiring water of a lower quality. These criteria are not to be interpreted as condoning water contact sports in proximity to sewage or industrial waste discharges regardless of treatment requirements.

(a) Bacteria: Fecal coliform not to exceed a geometric means of:

(1) Coastal Waters - 100 per 100 ml

(2) All other recreational waters - 200 per 100 ml

(3) Should water quality and sanitary studies show natural fecal coliform levels exceed 200/100 ml (geometric mean) occasionally in high quality recreational waters, then the allowable geometric means fecal coliform level shall not exceed 30 per 100 ml in lakes and reservoirs and 500 per 100 ml in free flowing fresh water streams.

The geometric mean will be used as the method of criteria expression. This technique will be applied to no less than four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours.

(b) Dissolved Oxygen: A daily average of 6.0 mg/l and no less than 5.0 mg/l at all times for waters designated as trout streams by the State Game and Fish Commission. A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times for waters supporting warm water species of fish.

(c) pH: Within the range of 6.0 - 8.5.

(d) Toxic Wastes, Other Deleterious Materials: None in concentrations that would harm man, fish and game or other beneficial aquatic life.

(e) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as trout or smallmouth bass waters by the State Game and Fish Commission, there shall be no elevation or depression of natural stream temperatures.

(3) Fishing, Propagation of Fish, Shellfish, Game and Other Aquatic Life; or for any other use requiring water of a lower quality.

(a) Dissolved Oxygen: A daily average of 6.0 mg/l and no less than 5.0 mg/l at all times for waters designated as trout streams by the State Game and Fish Commission. A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times for waters supporting warm water species of fish.

(b) pH: Within the range of 6.0 - 8.5.

(c) Bacteria: Fecal coliform not to exceed a geometric mean of 1,000 per 100 ml based on at least four samples taken over a 30-day period and not to exceed a maximum of 4,000 per 100 ml.

(d) Bacteria: (Applicable only to waters designated as approved shellfish harvesting waters by the appropriate State agencies). The requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program.

(e) Temperature: Not to exceed 90 degrees F. At no time is the temperature of the receiving waters to be increased more than 5 degrees F. above intake temperature except that in estuarine waters the increase will not be more than 1.5 degrees F. In streams designated as trout or smallmouth bass waters by the State Game and Fish Commission, there shall be no elevation or depression of natural stream temperatures.

(f) Toxic Wastes, Other Deleterious Materials: None in concentrations that would harm man, fish and game or other beneficial aquatic life.

(4) Navigation -

To provide for commercial ship trip traffic and protection of seamen or crews.

(a) Bacteria: Fecal coliform not to exceed a geometric mean of 5,000 per 100 ml based on at least four samples taken over a 30-day period.

(b) Dissolved Oxygen: No less than 3.0 mg/l at any time.

(c) pH: Within the range of 6.0 - 8.5.

(d) Toxic Substances, Other Deleterious Materials: None in concentrations that would damage vessels, prevent fish survival or otherwise interfere with commercial navigation.

(e) Temperature: Not to exceed 90 degrees F. At no time is the temperature of the receiving waters to be increased more than 5 degrees F. above intake temperature except that in estuarine waters the increase will not be more than 1.5 degrees F. In streams designated as trout or smallmouth bass waters by the State Game and Fish Commission, there shall be no elevation or depression of natural stream temperatures.

APPENDIX B

WATER QUALITY MONITORING DATA

(Environmental Protection Division, 1975)

STATION 01015001

LOCATION: Savannah River - U. S. Highway 17, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Drinking Water

TYPE OF STATION: Routine chemical

PERIOD OF RECORD: 02/01/68 to date

COOPERATING AGENCY: United States Army Corps of Engineers

NOTES: This station is located near the upper end of the Savannah River estuary. At times, salt water reaches this location. U. S. Highway 17 is upstream from all major municipal and industrial discharges in the Savannah area.

WATER QUALITY ASSESSMENT: The waters were of slightly lower quality than at Clyo. Nutrients, although low, were elevated above background levels. Very little organic or oxygen demanding materials were present. Fecal coliform densities ranged from low to moderate. The waters of the Savannah River at U. S. Highway 17 were of good quality.

VIOLATIONS: The maximum one-time fecal coliform density of 4,000/100 ml was exceeded for three of the ten samples taken.

CHANGES: Dissolved oxygen concentrations during the warm weather months were higher than during the previous year. There were no other changes. The over-all water quality has improved slightly.

SAVANNAH RIVER BASIN
STATION 01015001
SAVANNAH RIVER - U.S. HIGHWAY 17

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1656	02	13.0	68	7.9	6.8	- - -
02/05/74	1000	02	15.2	- - -	- - -	6.5	- - -
03/12/74	1502	02	19.3	63	6.3	6.7	- - -
04/11/74	0930	02	15.9	62	7.6	6.8	- - -
05/07/74	0938	02	22.1	176	5.3	6.8	- - -
06/04/74	0946	02	25.9	100	5.7	6.7	0.0
07/02/74	0940	02	26.0	207	5.5	6.8	- - -
08/13/74	1505	02	25.7	95	5.7	6.6	0.0
09/03/74	1350	02	27.3	90	5.7	6.7	0.0
11/05/74	1320	02	21.2	3,880	6.4	6.9	2.7
12/04/74	0935	02	10.2	1,000	9.1	6.9	0.8

DATE	LAB IDENT NUMBER (00008)	TURB JKSN JTU (00070)	COLOR PT-CO UNITS (00080)	CNDUCTVY AT 25C MICROMHO (00095)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)
01/15/74	000131	- - -	- - -	- - -	1.3	6.5	17	18
02/05/74	000338	- - -	- - -	- - -	1.2	7.0	18	25
03/12/74	000672	- - -	- - -	- - -	0.4	7.1	20	10
04/11/74	000854	- - -	- - -	- - -	1.0	6.9	18	23
05/07/74	001087	- - -	- - -	- - -	0.9	7.0	22	48
06/04/74	001267	- - -	- - -	- - -	1.1	6.8	27	13
07/02/74	001497	25	40	190	0.6	7.1	27	28
08/13/74	001878	25	60	83	0.7	6.7	16	10
09/03/74	002136	16	40	140	0.3	7.0	18	18
11/05/74	002776	11	10	4,000	0.7	7.2	31	7
12/04/74	002961	28	25	1,380	0.9	7.0	25	98

DATE	NH3-N TOTAL MG/L (00610)	NO2+NO3 N-TOTAL MG/L (00630)	PHOS-T P-WET MG/L (00665)	T ORG C C MG/L (00680)	TOT HARD CACO3 MG/L (00900)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/74	- - -	- - -	- - -	7.0	- - -	5.2	9,300
02/05/74	- - -	- - -	- - -	- - -	- - -	130.0	930
03/12/74	- - -	- - -	- - -	- - -	- - -	- - -	91
04/11/74	- - -	- - -	- - -	7.0	- - -	5.0	930
05/07/74	0.19	0.28	0.15	8.0	- - -	36.0	430
06/04/74	- - -	- - -	- - -	7.0	- - -	13.0	7,500
07/02/74	0.06	0.29	0.11	5.0	26	- - -	430
08/13/74	0.03	0.23	0.10	8.0	17	9.5	- - -
09/03/74	<0.02	<0.02	0.08	5.0	- - -	23.0	930
11/05/74	0.11	0.26	0.07	5.0	420	1,200.0	230
12/04/74	0.04	0.22	0.14	6.0	134	38.0	4,300

SAVANNAH RIVER BASIN
STATION 01013001
SAVANNAH RIVER - U.S. HIGHWAY 17

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMPLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)
01/13/76	1457	02	20.00	12.5	51	8.2	6.8
02/05/76	1010	02	20.00	15.3	70	- - -	6.5
03/12/76	1310	02	20.00	19.3	67	6.4	6.7
04/11/76	0943	02	20.00	15.9	53	7.6	6.7
05/07/76	0948	02	20.00	22.6	177	5.6	6.7
06/04/76	0936	02	20.00	23.9	100	5.7	6.7

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/13/76	000132	0.6	6.5	16	17	4.0	5.0
02/05/76	000331	1.2	- - -	7	33	- - -	240.0
03/12/76	000473	0.7	7.0	19	10	- - -	5.1
04/11/76	000855	0.8	7.1	13	29	6.0	5.0
05/07/76	001088	0.8	7.0	23	72	8.6	36.0
06/04/76	001268	0.8	6.9	21	20	7.0	13.0

SAVANNAH RIVER BASIN

STATION 01016001

LOCATION: Savannah River - Between buoys #14 and #16, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Inactive

PERIOD OF RECORD: 01/01/68 to 07/01/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1426	02	13.0	139	7.9	6.8	- - -
02/05/76	1032	02	14.9	1,180	- - -	6.6	0.9
03/12/76	1437	02	19.8	70	6.5	7.1	- - -
04/11/76	1004	02	16.4	80	7.3	6.8	- - -
05/07/76	0958	02	22.9	830	5.0	6.7	0.6
06/04/76	1014	02	24.0	418	7.7	- - -	0.2

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000129	0.8	6.7	18	26	6.0	23.0	930
02/05/76	000332	0.9	7.3	22	87	- - -	462.0	23,000
03/12/76	000670	0.7	7.1	20	19	- - -	5.9	91
04/11/76	000856	0.9	7.2	21	63	7.0	13.5	2,300
05/07/76	001089	0.9	7.2	24	64	9.0	235.0	2,300
06/04/76	001269	0.6	7.0	21	13	7.0	87.0	9,300

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	SAMPLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1432	02	20.00	13.0	98	7.9	6.8	- - -
02/05/76	1000	02	20.00	15.4	1,180	- - -	6.7	0.9
03/12/76	1445	02	20.00	19.6	70	6.5	6.7	- - -
04/11/76	1011	02	20.00	16.7	94	7.4	6.8	- - -
05/07/76	1007	02	20.00	22.9	1,000	5.0	6.7	0.7
06/05/76	1020	02	20.00	- - -	580	5.6	- - -	0.3

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/76	000130	0.8	6.7	18	30	5.0	19.3
02/05/76	000333	0.9	7.3	22	74	- - -	375.0
03/12/76	000671	0.6	7.1	20	14	- - -	5.8
04/11/76	000857	1.3	7.3	21	64	7.0	18.0
05/07/76	001090	1.2	7.2	28	98	9.0	300.0
06/05/76	001270	0.6	6.9	22	23	6.0	140.0

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Savannah River - Savannah Machine and Foundry, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Inactive

PERIOD OF RECORD: 01/01/68 to 07/01/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1401	02	13.5	1,800	7.5	6.8	- - -
02/05/76	1055	02	15.6	5,300	- - -	6.8	3.9
03/12/76	1615	02	19.8	89	6.4	6.6	- - -
04/11/76	1032	02	17.3	1,900	6.1	6.3	1.6
05/07/76	1025	02	23.0	6,900	5.9	6.6	4.2
06/04/76	1032	02	24.4	4,030	4.7	6.7	2.7

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000127	0.9	7.1	32	43	6.0	880.0	7,300
02/05/76	000336	0.7	7.4	31	39	- - -	2,130.0	4,300
03/12/76	000668	0.5	7.0	22	18	- - -	11.0	930
04/11/76	000858	0.5	7.2	21	88	7.0	620.0	230,000
05/07/76	001091	0.6	7.2	31	64	6.0	2,450.0	4,300
06/04/76	001271	0.4	7.1	27	16	5.0	1,400.0	7,300

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1408	02	20.00	13.5	2,710	7.5	6.9	- - -
02/05/76	1059	02	20.00	15.7	6,300	- - -	6.8	4.7
03/12/76	1623	02	20.00	19.8	89	6.6	6.7	- - -
04/11/76	1037	02	20.00	17.5	3,000	6.1	6.3	2.2
05/07/76	1035	02	20.00	23.0	8,100	4.0	6.6	5.0
06/05/76	1039	02	20.00	24.6	7,400	4.0	6.7	4.4

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/76	000128	0.8	7.1	25	42	6.0	1,170.0
02/05/76	000335	1.2	7.3	33	108	- - -	- - -
03/12/76	000669	0.4	7.0	21	12	- - -	11.0
04/11/76	000859	0.6	7.2	23	124	9.0	1,090.0
05/07/76	001092	1.1	7.1	33	64	7.0	2,950.0
06/05/76	001272	0.4	7.0	31	15	5.0	2,400.0

SAVANNAH RIVER BASIN

STATION 01019001

LOCATION: Savannah River - Opposite Savannah City Hall, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Inactive

PERIOD OF RECORD: 02/01/68 to 07/01/74

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1345	02	13.5	1,390	7.8	6.8	- - -
02/05/74	1120	02	15.8	7,100	- - -	6.9	30.0
03/12/74		02	19.9	243	8.6	6.6	0.1
04/11/74	1050	02	17.5	3,490	8.1	6.1	2.7
05/07/74	1044	02	23.2	8,300	7.4	6.6	5.0
06/04/74	1032	02	24.1	5,700	6.5	6.7	5.3

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/74	000125	0.8	7.0	21	43	6.0	485.0	9,300
02/05/74	000336	0.9	7.5	35	84	- - -	2,900.0	4,300
03/12/74	000666	0.3	7.2	18	- - -	- - -	46.0	930
04/11/74	000860	0.4	6.8	13	62	9.0	1,075.0	23,000
05/07/74	001093	0.6	7.1	31	34	3.0	2,950.0	2,300
06/04/74	001273	0.4	7.0	27	19	5.0	1,900.0	2,300

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1351	02	20.00	13.3	6,100	7.4	7.0	- - -
02/05/74	1128	02	20.00	15.6	7,900	- - -	6.9	15.3
03/12/74	1404	02	20.00	19.8	235	6.4	6.8	0.1
04/11/74	1037	02	20.00	17.7	5,100	6.2	6.3	3.5
05/07/74	1031	02	20.00	23.0	11,900	4.2	6.6	7.2
06/04/74	1059	02	20.00	24.8	9,900	3.6	6.7	5.9

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/74	000126	0.7	7.3	32	47	6.0	2,475.0
02/05/74	000337	1.0	7.5	33	138	- - -	3,000.0
03/12/74	000667	0.4	7.2	19	18	- - -	32.0
04/11/74	000861	0.4	7.2	23	244	3.0	1,850.0
05/07/74	001094	0.6	7.2	39	33	3.0	6,350.0
06/04/74	001274	0.5	7.0	36	12	5.0	3,600.0

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Savannah River - Mouth of Back River, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Inactive

PERIOD OF RECORD: 01/01/68 to 07/01/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1204	02	13.3	3,120	7.5	6.9	- - -
02/05/76	1309	02	13.5	4,450	- - -	7.0	3.6
03/12/76		02	20.1	540	8.6	6.3	0.2
04/11/76	1225	02	18.0	2,300	6.6	6.8	1.8
05/07/76	1216	02	23.4	4,300	4.7	6.7	2.8
06/04/76	1229	02	26.4	2,950	8.1	6.9	2.0

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000123	0.8	7.0	24	43	6.0	865.0	23,000
02/05/76	000338	0.6	7.3	28	22	- - -	1,375.0	2,300
03/12/76	000664	- - -	7.0	18	- - -	- - -	142.0	4,300
04/11/76	000862	0.5	7.2	24	39	4.0	810.0	23,000
05/07/76	001093	0.8	7.3	28	16	3.0	1,460.0	7,300
06/04/76	001275	0.5	7.3	27	12	5.0	890.0	3,900

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1210	02	20.00	14.5	12,000	5.1	7.2	- - -
02/05/76	1313	02	20.00	16.0	18,300	- - -	7.4	13.1
03/12/76		02	20.00	19.5	3,130	6.0	6.7	2.1
04/11/76	1228	02	20.00	17.4	18,700	6.1	6.9	7.2
05/07/76	1223	02	20.00	23.2	13,300	3.9	6.8	8.2
06/04/76	1233	02	20.00	25.2	17,000	3.3	7.0	10.1

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/76	000124	0.7	7.3	48	38	4.0	5,350.0
02/05/76	000339	0.7	7.8	66	23	- - -	8,700.0
03/12/76	000665	0.3	7.6	26	- - -	- - -	900.0
04/11/76	000863	0.7	7.7	40	27	4.0	4,500.0
05/07/76	001096	0.3	7.6	44	23	3.0	5,200.0
06/04/76	001276	0.7	7.6	32	9	4.0	6,400.0

SAVANNAH RIVER BASIN

STATION 01021001

LOCATION: Savannah River - Fort Jackson, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Routine chemical

PERIOD OF RECORD: 11/01/69 to date

COOPERATING AGENCY: United States Army Corps of Engineers

NOTES: This location is within the Savannah River estuary downstream from most wastewater sources in the area and near the oxygen sag point. A large variety and volume of wastewaters from municipal and industrial sources are discharged into Savannah Harbor.

WATER QUALITY ASSESSMENT: The Savannah River at Fort Jackson was degraded. Dissolved oxygen concentrations were greatly depressed. One concentration of 3.2 mg/l was near the lower limit specified for navigational waters. Ammonia nitrogen concentrations were high two times and fecal coliform densities confirmed pollution of the harbor by domestic wastewaters.

VIOLATIONS: There were no violations of water quality criteria for navigational waters.

CHANGES: There were no significant changes.

SAVANNAH RIVER BASIN
STATION 01021001
SAVANNAH RIVER - FORT JACKSON

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1140	02	13.5	2,140	7.1	6.9	- - -
02/05/74	1325	02	16.0	5,700	- - -	6.9	3.9
03/12/74		02	20.0	600	6.6	6.4	0.3
04/10/74	1245	02	18.6	4,620	6.1	6.6	3.3
05/07/74	1236	02	23.5	9,900	5.9	6.6	6.0
06/04/74	1243	02	24.8	6,900	5.6	6.7	4.0
07/02/74	1235	02	27.0	9,000	3.2	6.7	- - -
08/13/74	1142	02	26.3	2,030	6.3	6.7	1.3
09/03/74	1107	02	28.9	10,200	6.2	6.8	3.8
11/05/74	1102	02	20.8	14,700	5.6	6.8	9.3
12/04/74	1053	02	11.1	12,500	7.8	7.1	9.9

DATE	LAB IDENT NUMBER (00008)	TURB JKSN JTU (00070)	COLOR PT-CO UNITS (00080)	CNDUCTVY AT 25C MICROMHO (00095)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)
01/15/74	000121	- - -	- - -	- - -	0.7	7.0	26	48
02/05/74	000340	- - -	- - -	- - -	1.5	7.3	33	226
03/12/74	000662	- - -	- - -	- - -	0.7	7.1	16	- - -
04/10/74	000864	- - -	- - -	- - -	0.4	7.3	26	23
05/07/74	001097	- - -	- - -	- - -	0.5	7.2	33	27
06/04/74	001277	- - -	- - -	- - -	0.7	7.2	30	27
07/02/74	001498	42	20	6,000	0.8	7.1	31	150
08/13/74	001879	25	70	1,850	0.7	7.0	23	37
09/03/74	002135	13	20	9,780	0.1	7.2	34	17
11/05/74	002774	16	<5	15,800	1.1	7.1	48	25
12/04/74	002942	28	8	18,000	0.9	7.1	30	106

DATE	NH3-N TOTAL MG/L (00610)	NO2+NO3 N-TOTAL MG/L (00630)	PHOS-T P-WET MG/L (00665)	T ORG C C MG/L (00680)	TOT HARD CACO3 MG/L (00900)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/74	- - -	- - -	- - -	7.0	- - -	820.0	150,000
02/05/74	- - -	- - -	- - -	- - -	- - -	1,950.0	9,300
03/12/74	- - -	- - -	- - -	- - -	- - -	173.0	7,500
04/10/74	- - -	- - -	- - -	6.0	- - -	1,750.0	75,000
05/07/74	0.10	0.24	0.09	6.0	- - -	3,600.0	9,300
06/04/74	- - -	- - -	- - -	6.0	- - -	2,200.0	230,000
07/02/74	0.07	0.36	0.19	7.0	790	2,500.0	93,000
08/13/74	0.08	0.26	0.14	10.0	187	560.0	- - -
09/03/74	0.05	0.32	0.06	5.0	- - -	3,200.0	15,000
11/05/74	0.23	0.21	0.07	6.0	1,800	5,400.0	930
12/04/74	0.31	0.22	0.13	6.0	1,900	6,400.0	23,000

SAVANNAH RIVER BASIN
STATION 01021001
SAVANNAH RIVER - FORT JACKSON

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1149	02	20.00	13.5	5,000	7.6	7.0	- - -
02/05/74	1332	02	20.00	15.9	- - -	- - -	7.3	4.0
03/12/74		02	20.00	19.6	3,760	6.1	6.7	2.7
04/10/74	1247	02	20.00	18.4	16,700	6.4	7.1	11.2
05/07/74	1265	02	20.00	23.4	13,800	3.5	6.7	8.6
06/04/74	1252	02	20.00	24.9	9,000	4.2	6.8	5.2
07/02/74	1244	02	20.00	27.0	12,700	2.9	6.7	- - -
08/13/74	1146	02	20.00	26.4	4,320	4.1	6.7	2.8
09/03/74	1126	02	20.00	28.9	24,100	3.7	6.9	13.8
11/05/74	1128	02	20.00	20.8	16,900	3.6	6.9	11.0
12/04/74	1105	02	20.00	11.0	15,000	7.9	7.2	12.0

DATE	LAB IDENT NUMBER (00008)	TURB JKSN JTU (00070)	COLOR PT-CO UNITS (00080)	CNDUCTVY AT 25C MICROMHO (00095)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)
01/15/74	000122	- - -	- - -	- - -	0.8	7.0	31	46
02/05/74	000341	- - -	- - -	- - -	2.2	7.3	36	370
03/12/74	000663	- - -	- - -	- - -	0.4	7.3	27	- - -
04/10/74	000865	- - -	- - -	- - -	0.1	7.6	49	22
05/07/74	001098	- - -	- - -	- - -	0.4	7.3	61	44
06/04/74	001278	- - -	- - -	- - -	0.6	7.4	35	30
07/02/74	001499	63	20	7,500	1.2	7.1	35	150
08/13/74	001880	32	60	3,650	0.7	7.0	27	56
09/03/74	002136	10	8	21,700	<0.1	7.3	59	19
11/05/74	002775	18	<5	20,000	1.4	7.3	55	35
12/04/74	002963	84	10	21,500	1.1	7.3	60	290

DATE	NH3-N TOTAL MG/L (00610)	NO2+NO3 N-TOTAL MG/L (00630)	PHOS-T P-WET MG/L (00665)	T ORG C C MG/L (00680)	TOT HARD CACO3 MG/L (00900)	CHLORIDE CL MG/L (00940)
01/15/74	- - -	- - -	- - -	6.0	- - -	2,225.0
02/05/74	- - -	- - -	- - -	- - -	- - -	2,050.0
03/12/74	- - -	- - -	- - -	- - -	- - -	1,650.0
04/10/74	- - -	- - -	- - -	6.0	- - -	8,350.0
05/07/74	0.10	0.21	0.29	5.0	- - -	5,150.0
06/04/74	- - -	- - -	- - -	6.0	- - -	3,300.0
07/02/74	0.09	0.39	0.35	10.0	1,100	3,600.0
08/13/74	0.09	0.26	0.16	10.0	412	1,250.0
09/03/74	0.07	0.18	0.05	6.0	- - -	8,550.0
11/05/74	0.18	0.19	0.07	4.0	2,200	7,100.0
12/04/74	0.26	0.20	1.04	9.0	2,580	7,500.0

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Savannah River - Opposite entrance to South Channel, Chatham County

MANAGEMENT UNIT: 0102 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Navigation

TYPE OF STATION: Inactive

PERIOD OF RECORD: 02/01/68 to 07/01/74

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1130	02	13.5	2,970	7.6	6.8	- - -
02/05/74	1346	02	16.0	5,900	- - -	6.9	- - -
03/12/74	1126	02	19.9	1,080	6.5	6.8	0.8
04/10/74	1303	02	18.3	7,000	6.4	6.7	4.7
05/07/74	1236	02	27.3	10,000	3.8	6.6	6.1
06/04/74	1306	02	24.9	8,000	4.6	6.8	4.0

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/74	000119	0.6	7.0	23	42	6.0	1,130.0	3,900
02/05/74	000342	0.9	6.9	34	95	- - -	2,420.0	9,300
03/12/74	000659	0.5	7.2	22	- - -	- - -	301.0	- - -
04/10/74	000866	0.2	7.5	29	24	1.0	2,400.0	15,000
05/07/74	001100	0.6	7.3	34	27	1.0	3,800.0	9,300
06/04/74	001279	0.4	7.3	32	31	6.0	2,700.0	110,000

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	SAMPLE DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1137	02	20.00	13.5	9,000	7.2	7.1	- - -
02/05/74	1353	02	20.00	15.7	7,200	- - -	6.9	3.1
03/12/74	1132	02	20.00	19.4	3,300	6.1	6.8	3.5
04/10/74	1310	02	20.00	18.4	17,100	6.5	7.2	11.9
05/07/74	1304	02	20.00	23.1	16,300	3.9	6.8	10.0
06/04/74	1313	02	20.00	25.1	12,900	3.2	6.8	7.7

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/74	000120	0.6	7.3	40	52	- - -	6,000.0
02/05/74	000343	2.7	7.6	41	696	- - -	2,900.0
03/12/74	000660	0.5	7.6	26	- - -	- - -	1,650.0
04/10/74	000867	0.1	7.8	53	21	4.0	7,300.0
05/07/74	001101	0.8	7.4	47	44	5.0	6,100.0
06/04/74	001280	0.9	7.3	45	100	8.0	5,100.0

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Habersham Creek - 130 feet upstream from Wilmington River,
Chatham County

MANAGEMENT UNIT: 0113 - Savannah Metropolitan area

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Fishing

TYPE OF STATION: Inactive

PERIOD OF RECORD: 09/01/70 to 07/01/74

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	PH SU (00400)	SALINITY PPTH (00480)
01/15/74	1118	02	14.0	14,500	6.7	- - -
03/12/74	1116	02	19.5	5,100	6.2	3.2
04/10/74	1345	02	19.5	13,300	6.5	8.9
05/07/74	1344	02	23.9	15,300	6.5	9.7
06/04/74	1341	02	25.9	14,900	6.6	8.8

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	PHOS-T P-WET MG/L (00665)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/74	000135	0.8	6.5	22	30	- - -	4.0	3,900.0
03/12/74	000658	0.4	6.7	12	- - -	- - -	- - -	1,750.0
04/10/74	000870	0.2	7.6	36	14	- - -	5.0	5,200.0
05/07/74	001099	0.8	7.2	38	46	0.14	6.0	5,900.0
06/04/74	001283	1.1	7.3	44	38	- - -	10.0	5,300.0

DATE	IRON TOTAL UG/L (01045)
01/15/74	- - -
03/12/74	2,100
04/10/74	2,100
05/07/74	3,800
06/04/74	2,700

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Wilmington River - Mouth of Habersham Creek, Chatham County

MANAGEMENT UNIT: 0015 - Savannah Metropolitan area

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Fishing

TYPE OF STATION: Inactive

PERIOD OF RECORD: 09/01/70 to 07/08/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1106	02	13.5	8,900	7.1	6.3	- - -
02/05/76	1612	02	16.0	13,700	- - -	6.6	9.6
03/12/76	1100	02	19.5	5,000	8.6	6.3	3.3
04/10/76	1333	02	19.0	13,200	7.0	6.6	9.0
05/07/76	1330	02	23.2	19,200	6.9	6.5	12.1
06/04/76	1327	02	25.4	16,400	5.1	6.6	9.8

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	IRON TOTAL UG/L (01045)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000133	0.3	6.4	22	5.0	4,000.0	- - -	4,300
02/05/76	000344	0.5	7.3	28	- - -	6,000.0	5,500	9,300
03/12/76	000656	0.8	7.0	19	- - -	1,800.0	2,000	4,300
04/10/76	000868	0.4	7.3	33	5.0	5,350.0	1,400	4,300
05/07/76	001102	0.9	7.2	42	4.0	7,450.0	1,400	750
06/04/76	001281	0.7	7.1	38	6.0	6,100.0	750	930

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1112	02	20.00	14.0	14,500	7.6	6.7	- - -
02/05/76	1620	02	15.00	16.1	13,300	- - -	6.4	6.3
03/12/76	1106	02	20.00	19.3	5,700	8.1	6.6	3.0
04/10/76	1339	02	20.00	18.6	22,700	6.8	7.1	16.0
05/07/76	1336	02	20.00	23.0	21,800	4.3	6.6	14.0
06/04/76	1335	02	20.00	25.8	23,200	4.1	6.9	16.0

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	IRON TOTAL UG/L (01045)
01/15/76	000134	0.8	7.0	43	4.0	7,100.0	- - -
02/05/76	000345	0.7	6.6	38	- - -	5,800.0	5,900
03/12/76	000657	0.3	6.7	21	- - -	1,925.0	2,000
04/10/76	000869	0.3	7.7	62	5.0	9,900.0	1,500
05/07/76	001103	0.9	7.4	51	4.0	8,830.0	1,200
06/04/76	001282	0.7	7.6	58	9.0	8,900.0	1,100

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Savannah River - Lower Flats Range near Fields Cut, Chatham County

MANAGEMENT UNIT: 0192 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Fishing

TYPE OF STATION: Inactive

PERIOD OF RECORD: 02/01/68 to 07/01/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1045	02	13.5	8,600	7.4	7.0	- - -
02/05/76	1438	02	16.1	12,400	- - -	7.1	8.9
03/12/76	1033	02	19.0	9,600	8.1	7.0	6.2
04/10/76	1404	02	18.8	15,000	7.0	7.1	10.3
05/07/76	1403	02	23.4	14,500	4.2	6.8	8.9
06/04/76	1338	02	25.1	11,400	4.4	6.9	6.7

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000117	1.1	7.2	37	36	6.0	3,850.0	4,300
02/05/76	000346	0.7	7.6	46	25	- - -	- - -	1,500
03/12/76	000654	0.3	7.4	38	18	- - -	3,750.0	2,300
04/10/76	000871	0.1	7.7	43	16	5.0	6,000.0	2,100
05/07/76	001104	0.7	7.3	43	27	6.0	5,300.0	2,300
06/04/76	001284	0.6	7.3	38	13	7.0	4,100.0	2,300

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1049	02	20.00	13.5	14,300	7.4	7.2	- - -
02/05/76	1444	02	20.00	16.0	14,300	- - -	7.2	10.3
03/12/76	1038	02	20.00	18.8	17,300	8.4	7.1	- - -
04/10/76	1612	02	20.00	18.4	22,200	7.0	7.3	13.9
05/07/76	1615	02	20.00	23.8	20,309	4.6	7.0	12.9
06/04/76	1403	02	20.00	25.4	19,800	3.9	7.1	11.9

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/76	000118	0.9	7.5	33	40	6.0	7,100.0
02/05/76	000347	0.7	7.7	30	42	- - -	6,430.0
03/12/76	000655	0.9	7.8	44	112	- - -	10,900.0
04/10/76	000872	0.2	7.8	40	38	5.0	9,700.0
05/07/76	001105	1.3	7.6	39	34	5.0	8,300.0
06/04/76	001285	0.8	7.3	35	31	12.0	7,100.0

SAVANNAH RIVER BASIN

STATION [illegible]

LOCATION: Savannah River - Crossing Range near buoy 32B, Chatham County

MANAGEMENT UNIT: 0152 - Savannah River from U. S. Highway 301 to mouth

GEOLOGICAL PROVINCE: Coastal Plain

CLASSIFICATION: Fishing

TYPE OF STATION: Inactive

PERIOD OF RECORD: 02/01/68 to 07/01/76

SURFACE SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1016	02	13.5	9,800	7.4	7.1	- - -
02/05/76	1500	02	16.1	15,700	- - -	7.2	11.2
03/12/76	1008	02	18.9	10,300	8.4	7.8	- - -
04/10/76	1436	02	18.3	18,300	7.3	7.4	12.8
05/07/76	1431	02	27.2	17,800	4.8	6.9	11.2

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)	FEC COLI MPNECMED /100ML (31615)
01/15/76	000115	1.9	7.2	44	37	9.0	4,900.0	4,300
02/05/76	000348	0.7	7.7	56	18	- - -	6,900.0	2,300
03/12/76	000652	0.5	7.4	40	12	- - -	4,150.0	6,300
04/10/76	000873	6.2	7.7	57	12	5.0	7,800.0	2,300
05/07/76	001106	0.7	7.5	72	32	4.0	7,150.0	4,300

DEEP-WATER SAMPLES

DATE	TIME	COLLECT AGENCY CODE (00027)	VSAMLOC DEPTH FEET (00003)	WATER TEMP CENT (00010)	CNDUCTVY AT 25C MICROMHO (00095)	DO MG/L (00300)	PH SU (00400)	SALINITY PPTH (00480)
01/15/76	1022	02	20.00	13.5	18,000	7.8	7.6	- - -
02/05/76	1507	02	20.00	16.0	17,900	- - -	7.3	13.2
03/12/76	1017	02	20.00	18.2	22,900	7.1	7.8	16.3
04/10/76	1443	02	20.00	18.1	27,000	7.2	7.8	19.7
05/07/76	1440	02	20.00	22.9	22,800	6.8	7.1	14.7

DATE	LAB IDENT NUMBER (00008)	BOD 5 DAY MG/L (00310)	LAB PH SU (00403)	T ALK CACO3 MG/L (00410)	RESIDUE TOT NFLT MG/L (00530)	T ORG C C MG/L (00680)	CHLORIDE CL MG/L (00940)
01/15/76	000116	0.9	7.8	68	39	6.0	9,900.0
02/05/76	000349	0.7	7.7	58	30	- - -	8,200.0
03/12/76	000653	0.7	8.0	78	- - -	- - -	- - -
04/10/76	000874	0.1	8.0	51	33	8.0	12,300.0
05/07/76	001107	1.7	7.7	63	84	6.0	9,200.0

APPENDIX C

BIOLOGICAL INVENTORIES

BIRDS

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range in U.S.	Project Impact
Mallard Duck Anas platyrhynchos	Migrant	Waterways and Marsh area regionwide	Common	U.S.	None
Ring-necked Duck Aythya collaris	Migrant	Regionwide Wooded lakes Waterways	Common	U.S.	None
Green-winged Teal Anas carolinensis	Migrant	Regionwide Marsh Areas	Common	U.S.	None
Blue-winged Teal Anas discors	Migrant	Regional Marsh Areas	Uncommon	U.S.	None
Widgeon Mareca americana	Migrant	Regional Ponds and Bays	Uncommon	U.S.	None
Shoveler Spatula clypeata	Migrant	Regional Ponds and Marshes	Uncommon	U.S.	None
Gadwall Anas strepera	Migrant	Regional Waterways	Occasional	U.S.	None
Pintails Anas acuta	Migrant	Regional Ponds and Marshes	Uncommon	U.S.	None
Wood Duck Aix sponsa	Resident	Regional Ponds and Marshes Lowland Swamps	Common	E. U.S.	None
Coots Fulica americana	Resident	Regional Waterways Marsh	Common	U.S.	None
Gallinules Porphyrula martinica	Resident	Regional Lowlands Swamp Waterways	Common	South-east Occa-sionally North	None
Canada Geese Branta canadensis	Migrant	Regional Waterways	Occasional	North America	None
Snow Geese Chen hyperborea	Migrant	Regional Coastal Waterways	Occasional	Mid to E. North America	None
Osprey Pandion haliaetus carolinensis	Resident	Regional Waterways	Occasional	U.S.	None

BIRDS (Cont'd)

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range in U.S.	Project Impact
Blue Geese *Chen caerulescens*	Migrant	Regional Coastal Waterways	Rare	Mid to E. North America	None
Piedbilled Grebe *Podilymbus podiceps*	Migrant	Regional Marshes Waterways	Common	Eastern North America	None
Great Blue Heron *Ardea herodias*	Resident	Regional Waterways	Common	Eastern North America	None
Little Blue Heron *Florida caerulea*	Resident	Regional Waterways	Common	South and Eastern U.S.	None
Snowy Egret *Leucophoyx thula*	Resident	Regional Waterways	Common	Eastern U.S.	None
Common Egret *Casmerodius albus*	Resident	Regional Swamps and Waterways	Common	Eastern U.S.	None
Green Heron *Butorides virescens*	Resident	Regional Waterways	Common	Eastern U.S.	None
Black-Crowned Heron *Nycticorax nycticorax*	Resident	Waterways	Common	Eastern U.S.	None
Yellow-Crowned Heron *Nyctanassa violacea*	Resident	Swamps Waterways	Common	Eastern U.S.	None
Least Bittern *Ixobrychus exilis*	Resident	Marsh and Waterways Regionally	Occasional	Mid to Eastern U.S.	None
King Rail *Rallus elegans*	Resident	Marsh area and Waterways	Uncommon	Mid to Eastern U.S.	None
Louisiana Heron *Hydranassa tricolor*	Resident	Swamp, Marshes and other waterways	Occasional	Eastern Seaboard and Southern U.S.	None

BIRDS (Cont'd)

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Cattle Egret *Bubulcus ibis*	Resident	Waterways, Swamp and Marshes	Common	Southern U.S.	None
White Ibis *Guara alba*	Resident	Marsh and Waterways	Abundant	Deep South	None
Wood Ibis *Mycteria americana*	Resident	Coastal Areas	Common	Southern U.S.	None
Glossy Ibis *Plegadis falcinellus*	Migrant	Regional Marshland Area	Rare	Southern U.S. Rarely North	None
Yellow-legs *Totanus sp.*	Migrant	Regional Mudflats and Margins	Uncommon	U.S.	None
Spotted Sandpiper *Actitis macularia*	Migrant	Waterways (Mostly lakes and stream) Regionally	Uncommon	U.S.	None
Solitary Sandpiper *Tringa solitaria*	Migrant	Marsh Wilderness Regionally	Occasional	Eastern U.S.	None
Common Snipe *Capella gallinago*	Migrant	Marsh and Stream Areas Regionally	Common	Midwestern and Eastern U.S.	None
Ring-Billed Gull *Larus delawarensis*	Migrant	Regional Coast Waterways	Common	U.S.	None
Virginia Rail *Rallus limicola*	Migrant	Regional Marshlands	Rare	Midwestern and Eastern U.S.	None
American Bittern *Botaurus lentiginosus*	Migrant	Regional Marshes	Uncommon	U.S.	None

BIRDS (Cont'd)

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Black Tern *Chlidonias nigra*	Migrant	Regional Marsh	Rare	Eastern U.S.	None
Brown Pelican *Pelecanus occidentalis*	Migrant	Regional Waterways	Endangered	Southern U.S.	None
Southern Bald Eagle *Haliaeetus leucocephalus leucocephalus*	Migrant	Regional Oceans, Rivers and Lakes	Endangered	U.S.	None
American Peregrine Falcon *Falco peregrinus anatum*	Migrant	Regional	Rare	U.S.	None
Red-Cockaded Woodpecker *Dendrocopus borealis*	Resident	Regional Pine Woodlands	Uncommon	Southern States	None

MAMMALS

White-Tailed Deer *Odocoileus virginianus*	Resident Woody Areas	Statewide	Common	U.S.	Minimal
Marsh Rabbit *Sylvilagus palustris*	Resident Coastal Plains	Coastal Plains, Lowlands, Marshes and Floodplain Area	Common	Southeast U.S.	Moderate
Raccoon *Procyon lotor*	Resident Various Habitats	Statewide	Common	U.S.	Minimal
Opossum *Didelphis marsupialis*	Resident	Statewide Streams Bottomlands	Abundant	U.S.	Minimal
Squirrel *Sciurus sp.*	Resident	Statewide	Abundant	U.S.	None
River Otter *Lutra canadensis*	Frequent Resident	Coastal Plains Salt Marshes	Uncommon	East Coast	None

MAMMALS (Cont'd)

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Gray Fox *Urocyon cinereoargenteus*	Resident	Statewide	Common	Southeast U.S.	None
Bobcat *Lynx rufus*	Resident	Statewide	Occasional	Southern U.S.	None
Mink *Mustela vison*	Resident	Statewide Streams and Marshes	Common	U.S.	Minimal
FISH					
Spotted Gar *Lepisosteus oculatus*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Blueback Herring *Alosa aestivalis*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Hickory Shad *Alosa mediocris*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
American Shad *Alosa sapidissima*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Atlantic Menhaden *Brevoortia tyrannus*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Gizzard Shad *Dorosoma cepedianum*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Threadfin Shad *Dorosoma petenense*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Bay Anchovy *Anchoa mitchilli*	Migrant	Coastal Region	Common	Southeast Coast	Minimal

FISH (Cont'd)

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Golden Shiner *Notemigonus crysoleucas*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Shiner *Notropis sp.*	Resident	Coastal Region	Common	Southeast Coast	Minimal
White Catfish *Ictalurus catus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Channel Catfish *Ictalurus punctatus*	Resident	Regional	Abundant	Southern Region	Moderate
American Eel *Anguilla rostrata*	Resident	Regional	Occasional	Southern Region	Minimal
Striped Bass *Morone saxatilis*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Dollar Sunfish *Lepomis marginatus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Spotted Sunfish *Lepomis punctatus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Spottail Goby *Gobionellus stigmaturus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Striped Mullet *Mugil cephalus*	Resident	Coastal Region	Common	Southeast	Minimal
Bay Whiff *Citharichthys spilopterus*	Migrant	Coastal Region	Common	Southeast	Minimal
Hog Choker *Trinectes maculatus*	Migrant	Coastal Region	Common	Southeast	Minimal

ADDITIONAL FISH SPECIES

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Sea Trout *Cynoscion nebulosus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Spot *Leiostomus xanthurus*	Resident	Coastal Region	Common	Southeast Coast	Minimal
Weakfish *Cynoscion regalis*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Croaker *Micropogon undulatus*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Cobia *Rachycentron canadum*	Migrant	Coastal Region	Common	Southeast Coast	Minimal
Tripletail *Lobotes surinamiensis*	Migrant	Coastal Region	Common	Southeast Coast	Minimal

TREES

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
Bald Cypress *Taxodium distichum*	Resident	Regional Wetlands and Bottomlands	Common	Atlantic and Gulf Coast Plains	Minimal
Sweetgum *Liquidambar styraciflua*	Resident	Regional Bottomlands	Common	South to Southeast U.S.	Minimal
Red Maple *Acer rubrum*	Resident	Regional Swampy Sites and Uplands	Abundant	Mid to Eastern U.S.	Minimal
Willow *Salix longipes*	Resident	Regional Moist Area	Common	Eastern U.S.	Minimal
Cattail *Typha latifolia*	Shallow Waters Close to Mud	Regional Bays, Marshes and Moist Areas	Abundant	U.S.	Minimal
Pine *Pinus sp.*	Resident	Regional Area	Abundant	U.S.	Minimal
Hickory *Carya sp.*	Resident	Regional Area	Common	Eastern U.S.	Minimal
Hophornbeam *Ostrya virginiana*	Resident	Regional Moist Area	Occasional	Eastern U.S.	Minimal
Oak *Quercus sp.*	Resident	Regional Area	Abundant	U.S.	Minimal

REPTILES

American Alligator *Alligator mississippiensis*	Resident	Marsh, Swamps and Other Similar Areas	Occasional	Southeastern U.S.	Minimal

PLANTS

Species	Habitat and/or Seasonal Status	Range in Region or State	Abundance In Region	Range In U.S.	Project Impact
White Waterlilies *Nymphaea odorata*	Shallow Ponds and Lakes	Throughout Region	Common	Eastern	
Bladderworts *Utricularia sp.*	Floating Aquatic Plants	Throughout Region	Common	U.S.	Moderate
Pickerelweed *Pontederia sp.*	Shallow Bodies of Water	Coastal Waterway Areas	Common	Southeastern Seaboard of U.S.	Minimal
Water Hyacinth *Eichhornia crassipes*	Water and Very Moist Areas	Regional Waterways and Moist Areas	Common	Southeast States	Minimal
Giant Cutgrass *Zizaniopsis miliacea*	Swamps, Marshes, and Shallow Water	Coastal Swamp, Marsh and River	Abundant	South to Southeast U.S.	
Alligatorweed *Alternanthera philoxeroides*	Water to Dry Field	Various Regional Water and Soil Conditions	Abundant	Southeast and Gulf Coast	Minimal
Peltandra *Peltandra sp.*	Muddy Shores and Shallow Water	Throughout Region	Common	S. Maine to Gulf of Mexico	Minimal
Sawgrass *Cladium jamaicensis*	Water and Dry Ground	Region Bottomland and Marshes	Abundant	Southeast and Gulf Coast	Minimal
Smooth Cordgrass *Spartina alterniflora*	Organic Soil	Coastal Marshes Throughout Region	Abundant	Atlantic and Gulf Coast Region	Minimal
Cattail *Typha latifolia*	Shallow Waters Close to Mud	Regional Bays, Marshes and Moist Areas	Abundant	U.S.	Minimal

APPENDIX D

LETTERS RECEIVED BY THE DISTRICT ENGINEER ON THE DRAFT ENVIRONMENTAL STATEMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 PEACHTREE ST., N.E.
ATLANTA, GEORGIA 30309

Lieutenant Colonel Freeman C. Cross, USA
Deputy District Engineer
Savannah District, Corps of Engineers
P. O. Box 889
Savannah, Georgia 32402

Dear Colonel Cross:

We have reviewed the Draft Environmental Impact Statement on channel widening and navigation of Savannah Harbor, Georgia.

In the discussion on Pages 3 through 5 of the proposed disposal plan and disposal areas, little description or discussion is presented for Sites A, B or C, and as can be seen from Table 1, Site C is one of the larger areas.

Area C is described as a low-lying area that suffers from municipal pollution and mosquito infection. The area poses a health hazard and potential source of encephalitis. However, information is lacking on whether the area contains tidal marsh, and if so, how many acres or what other biotic communities may be present at the site. This information is needed to give a proper evaluation of dredging and disposal.

In addition, a better description of the 27 acres of land lost along the northern bank to channel widening is necessary to properly evaluate this phase of the project. Is all of the site already bulkheaded or is some marsh involved in the dredging of this area? Furthermore, a better description of Spoil Areas D, E, F, G, H and I would be helpful.

The evaluation of possible effects upon the benthic community should be strengthened. We note two papers are cited that deal with recolonization and dredging effects of the benthic community, which is supportive that dredging has no serious effects on the benthic community. However, if one reads the complete papers and looks at sampling methods and data analysis, it is understandable how one could reach such conclusion.

In the first paper by Stickney and Perlmutter (1975), the author conducted a study of dredging effects on a mud bottom area in which they sampled with a Ponar dredge sampler and collected replicate hauls. It should be injected here that this type of bottom generally does not support a diverse fauna, especially when the sediments are highly organic and dissolved oxygen is low. Sediment analyses revealed high organics at both stations, and no dissolved oxygen data are presented, nor are any depths given for these stations. Usually the major constituent in mud and silt bottom benthic community is the polychaete worms which is indicated to be the case at both stations. Based upon results from diversity indices, it is concluded that dredging has no serious effects on the benthic community, but the fact remains that inhabitants of a mud and silt bottom are generally tolerant, so it is understandable why recovery of such an area would be rapid. However, it should be pointed out that it is improbable that the whole area in the vicinity of the project is a mud and silt bottom.

The other publication, Stickney (1972), is cited (Pages 24, 4.16) to back up the statement that "dredging activities would not have any long-term effects on the ichthyofauna and benthic macroinvertebrates." Stickney concludes that according to his otter trawl samples, dredging has no effect on the vertebrate and invertebrate organisms. However, the primary misconception in this investigation is the use of otter trawl samples to evaluate the benthic macroinvertebrate population. A 10-minute non-duplicated otter trawl was the method utilized at each station, and no quantitative methods were applies.

In view of the foregoing, we have rated ER- (environmental reservations) to certain aspects of the project and 2 (insufficient information) to the Impact Statement.

If we can be of further assistance in any way, please let us know.

Sincerely yours,

by John A. Little, Deputy

Jack E. Ravan
Regional Administrator

FEDERAL ENERGY ADMINISTRATION
REGION IV
1655 PEACHTREE STREET, N.E.
ATLANTA, GEORGIA 30309

June 28, 1976

LTC Freeman G. Cross, Jr.
Deputy District Engineer
Corps of Engineers
Department of the Army
P. O. Box 889
Savannah, Georgia 31402

Dear Colonel Cross:

RE: Savannah Harbor Widening
EIS

Thank you for the opportunity to comment on the draft EIS concerning the Channel Widening for Navigation of Savannah Harbor.

Our examination of the EIS and the accompanying feasibility report did not uncover any discrepancy with FEA mission areas. Moreover, the improvement of harbor conditions under which such commodities as gasoline, distillate fuel oil, residual oil and crude oil are shipped is in keeping with FEA's desire to bring about efficient and equitable distribution of energy supplies to all parts of the Nation.

If we can be of assistance to you, please contact Robert Biccum at (404) 526-5463.

Sincerely,

Fredric E. Johnson
Regional Administrator

cc: Office of Environmental Impact

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230

July 15, 1976

Lt. Colonel Freeman G. Gross, Jr.
Deputy District Engineer
Savannah District
Corps of Engineers
Department of the Army
P. O. Box 889
Savannah, Georgia 31402

Dear Colonel Gross:

This is in reference to your draft environmental impact statement entitled "Channel Widening for Navigation, Savannah Harbor, Georgia." The enclosed comments from the National Oceanic and Atmospheric Administration are enclosed for your consideration.

Thank you for giving us an opportunity to provide these comments, which we hope will be of assistance to you. We would appreciate receiving eight (8) copies of the final statement.

Sincerely,

Sidney R. Galler
Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

Enclosure - Memo from National Marine Fisheries Service,
July 8, 1976

Duval Building
9450 Gandy Boulevard
St. Petersburg, FL 3370

June 28, 1976

FSE21/RPC

TO: Director
Ofc of Ecology & Environmental Conservation, EE

THRU: for Robert L. Schuler JUL 0 8 1976
Associate Director for
Resource Management, F3

FROM: for /s/ Andreas Mager, Jr.
William H. Stevenson
Regional Director

SUBJECT: Comments on Draft Environmental Impact Statement -
Channel Widening for Navigation, Savannah Harbor,
Georgia - COE (DEIS #7605.42)

The draft environmental impact statement for Channel Widening for Navigation, Savannah Harbor, Georgia, that accompanied your memorandum of May 24, 1976, has been received by the National Marine Fisheries Service for review and comment.

The statement has been reviewed and the following comments are offered for your consideration.

SPECIFIC COMMENTS:

2.00 Environmental Setting Without the Project

2.39 Aquatic Resources

Page 16, paragraph 2.40

This paragraph states that, "Juncus roemerianus is considered to be the least important of the common marsh grasses." We sugge that this sentence be reworded to state that Juncus roemerianu is considered to be less productive than Spartina alterniflora.

Page 17, paragraph 2.44

The blueback herring (Alosa aestivalis) should be added to the of anadromous fishes contained in this paragraph. (See Appendi page C-5).

cc:
F34 (3)
FSE211

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION IV
50 7TH STREET N.E.
ATLANTA, GEORGIA 30323

June 15, 1976

OFFICE OF THE
REGIONAL DIRECTOR

HEW-665-5-76

Freeman G. Cross, Jr.
LTC, Corps of Engineers
Deputy District Engineer
Department of the Army
Savannah District Corps of Engineers
Post Office Box 889
Savannah, Georgia 31402

Subject: Channel Widening For Navigation Savannah Harbor, Georgia 77001

Dear Mr. Cross:

We have reviewed the subject draft Environmental Impact Statement. Based upon the data contained in the draft, it is our opinion that the proposed action will have only a minor impact upon the human environment within the scope of this Department's review. The impact statement has been adequately addressed for our comments.

Sincerely yours,

Philip P. Sayre

Philip P. Sayre
Regional Environmental Officer
DHEW - Region IV

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ATLANTA AREA OFFICE
PEACHTREE CENTER BUILDING, 230 PEACHTREE STREET, N.W.
ATLANTA, GEORGIA 30303

REGION IV
Pershing Point Plaza
1371 Peachtree Street, N.E.
Atlanta, Georgia 30309

June 29, 1976

IN REPLY REFER TO:

Colonel Freeman G. Cross, Jr.
Deputy District Engineer
Department of the Army
Savannah District, Corps of Eng.
Post Office Box 889
Savannah, Georgia 31402

Dear Colonel Cross:

Subject: Draft Environmental Impact Statement
Channel Widening for Navigation
Savannah Harbor, Georgia (77001)

We have reviewed the Draft E.I.S. for the above captioned project and have no specific comments to offer. We feel the Statement adequately addressed all concerns within our area of expertise.

Thank you for the opportunity to comment on the Draft E.I.S. We would appreciate receiving a copy of the Final Statement when it is published.

Sincerely,

W. A. Hartman
Area Director

United States Department of the Interior

OFFICE OF THE SECRETARY

Southeast Region / 148 Cain St., N.E. / Atlanta, Ga. 30303

ER-76/503

Lieutenant Colonel Freeman G. Cross, Jr.
Deputy District Engineer
U. S. Army Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Dear Lieutenant Colonel Cross:

As requested in Your May 18, 1976, letter to the Assistant Secretary, Program Policy, we have reviewed the draft environmental impact statement for the proposed Channel Widening for Navigation, Savannah Harbor, Chatham County, Georgia, project for its effects on outdoor recreation, geology, hydrology, fish and wildlife resources, and national parks, landmarks and historic areas.

We offer the following comments for your consideration:

General Comments

We note that discussion of cultural resources and onsite surveys is based upon data accumulated as a result of investigations of other proposed projects. The final statement should contain evidence of consultation with the State Historic Preservation Officer. That office should be able to provide data on any cultural resources in the area of the proposal's potential impacts, that are presently in the process of nomination to the National Registry of Historic Places. This consultation has evidently been omitted in the draft statement.

The statement adequately addresses fish and wildlife aspects of the project, with the exception of the items outlined below.

Specific Comments

Page 3, paragraph 1.06

The location and characteristics of ocean disposal site O and the biological aspects of ocean spoil deposition should be discussed.

Page 3, paragraph 1.07

Disposal areas A, B, and C should be described in this paragraph, since they are listed in Table 1 and mentioned in paragraph 6.06.

Spoil disposal area F is improperly described. Most of this area is densely wooded with mixed deciduous trees.

Page 23, paragraph 2.59

This section should be expanded to provide information on the scope of the survey conducted by the Institute of Archeology and Anthropology of the University of South Carolina.

If that survey failed to investigate the lower Savannah area in the State of Georgia, it is incumbent upon the Federal agency to initiate adequate surveys and provide information on the results.

Page 25, paragraph 4.04

Disposal area F is described improperly. (See comments above).

Page 28, paragraph 4.12

The effects of spoil deposition with regard to terrestrial wildlife should be discussed further. Spoil areas F, H, and I are isolated pockets of high value wildlife habitat located in a highly industrialized area. Those displaced mammals, reptiles, and amphibians which survive transition to another suitable habitat will place additional strains on the carrying capacity of that habitat, so that ultimately, the destruction of wildlife habitat results in decreased wildlife populations.

Page 29, paragraph 4.14

We believe the study by Stickney and Perlmutter to be an inappropriate reference for predicting benthic recovery following harbor widening. This study was geographically specific and although there are similarities between Savannah Harbor and the study area, the assumptions made in paragraph 4.14 are speculative. While the referenced study dealt with maintenance dredging in 12 foot depths, this environmental report pertains to dredging which will expose a new bottom at 38 to 40 foot. Furthermore, the Stickney and Perlmutter investigation involved only one study site and one control site. Throughout the 2-year study, samples varied greatly at both sites as to species diversity and numbers of individual organisms. Because of this inconsistent data and the limited scope of the study, any conclusions drawn from the investigation should be qualified. Finally, the statement regarding diversity values is misquoted.

Page 32, paragraph 6.04

The alternative of using suitable dredged material for beach nourishment on Savannah Beach should be discussed. An explanation of why disposal sites A, B, C, D. and E were selected for the environmental quality plan but were not selected for the proposed plan is also necessary.

Appendix C-1

Wood duck is notably absent from this list.

Sincerely yours,

June Whelan

(Miss) June Whelan
Special Assistant to the Secretary
Southeast Region

Office of Planning and Budget
Executive Department

James T. McIntyre, Jr.
Director

G E O R G I A   S T A T E   C L E A R I N G H O U S E   M E M O R A N D U M

TO: U.S. Army Engineer District
Savannah
Corps of Engineers
Savannah, Georgia

CHB
FROM: Charles H. Badger, Administrator
Georgia State Clearinghouse
Office of Planning and Budget

DATE: July 16, 1976

SUBJECT: RESULTS OF STATE-LEVEL REVIEW

Applicant: The Corps of Engineers

Project: Channel Widening for Navigation - Savannah Harbor

State Clearinghouse Control Number: 76-05-20-03

The State-level review of the above-referenced project has been completed. As a result of that review process, the project is recommended for further development with the following recommendations for strengthening the project:

The following comments express the views, concerns and recommendations of the State of Georgia. The Corps of Engineers is requested to specifically address these comments and, where possible, resolve the associated issues prior to finalization of the EIS. The Corps is also encouraged to contact directly the Department of Natural Resources (DNR) for clarification or discussion of the various concerns expressed in this review. If coordination assistance is necessary, the Corps should also contact the State Clearinghouse. The appropriate direct, initial contact within DNR is Mr. Ray Siewert, Comprehensive Review Coordinator, Department of Natural Resources, 270 Washington Street, S.W. Atlanta, Georgia 30334 (phone: 404/656-5162).

The Marshland Protection Section of the Game and Fish Division, DNR, is particularly concerned by the continued widening and deeping of the Savannah Harbor and with the magnitude of dredging and spoil deposition associated with the maintenance of the Harbor. This cannot avoid having a long-term, increasingly detrimental effect on the marshlands and other environmental resources of the area.

This project creates 27 additional acres of river channel bottom to be maintained. There appears to be an assupmtion on the part of the Corps that no additional sediment will accumulate as a result from the transport of materials from ocean bottoms, into the harbor and this factor is not taken into account. The Corps also does not appear to take into account the slumping of the side slopes of the new channel.

The marshlands Protection Section of the Game and Fish Division is opposed to the continued building of high ground in former marsh and estuarine areas by spoil deposition, and therefore encourages the Corps to find alternative uses for dredge spoil. Georgia's water quality and air quality standards must be adhered to where applicable.

On page three, paragraph 106, the Corps proposes to use a bucket dredge and barge for dredging and disposal. Because of the tremendous volume of silt, heavy metals and other potentially biologically deleterious substance to be stirred up, we are concerned about the possible impact on adjacent floral and faunal communities. It seems probable that the massive quantities of silt created by this type of operation will have significant adverse effects on estuarine or benthic biota. Although organisms native to Savannah Harbor have evolved under conditions of high silt transport and can be expected to withstand or recolonize after periods of inordinately high siltation, this recolonization is impeded by a less than optimum substrate in which organisms might find attachment. The dredging operation, while removing large particulate from the bottom, resuspend fine particles to settle elsewhere. The "fines" impede the respiration of various estuarine organisms as well as create substrate which is often unsuitable for attachment of many benthic species. In view of these factors, we recomment that the Corps strongly consider using a hydraulic dredge with cutter head instead of the proposed bucket dredge. This would considerably reduce the adverse impacts which are of concern to the State. Approval must be obtained from the Maintenance Engineer of the Georgia Department of Transportation before any earthwork is accomplished in the vicinity of the foundation of the Talmadge Memorial Bridge.

The Corps of Engineers may also expect comments for this proposal from the Coastal APDC and the Chatham County-Savannah Metropolitan Planning Commission.

cc: Ray Siewert, DNR
Bruce Osborn, OPB
O. H. Roberts, DOT

Enclosures: Review comments prepared by the Department of Natural Resources, dated July 1, & 13, 1976

Review comments prepared by the Georgia Department of Transportation, dated June 23, 1976

Review comments prepared by the Coastal APDC, dated May 28, 1976

READEX FICHE

Department of Natural Resources
270 WASHINGTON STREET, S.W.
ATLANTA, GEORGIA 30334
(404) 656-3500

Joe D. Tanner
COMMISSIONER

Charles M. Parrish, III
EXECUTIVE ASSISTANT

July 1, 1976

MEMORANDUM

TO: Chuck Badger, Administrator
State Clearinghouse

FROM: Ray Siewert, Coordinator
Comprehensive Review

ISSUE: Completion of Department of Natural Resources Review of State Clearinghouse Control Number 76-05-20-03

APPLICANT: Savannah Corps of Engineers

PROJECT: Draft Environmental Statement for Channel Widening for Navigation, Savannah Harbor

COMMENTS

Game and Fish Division

The concerns of the Game and Fish Division of the Department of Natural Resources expressed by the Marshland Protection Section are for the following points:

1. The continued widening and deepening of Savannah Harbor in the magnitude of dredging and spoil deposition associated with the maintenance of the harbor.

2. This project creats 27 additional acres of river channel bottom to be maintained in the assumption on the part of the Corps that no additional sediment will accumulate is not taken into account in the transport of materials from ocean bottoms into the harbor. Also, does not account for slumping of side slopes of the new channel.

3. We are opposed to the continued building of high ground in former marsh and estuarine areas by spoil deposition.

4. Encourage finding alternative uses for dredge spoil.

Environmental Protection Division

This proposal is considered to be consistant with those State goals, (See additional attached page)

cc: Jim Setser
Claude Hastings
Bill Clark
Lonice Barrett
Gordon Harrison

policies, objectives, plans, programs and fiscal resources with which this division is concerned. However, Georgia Water Quality Standards and Georgia Air Quality Standards must be adhered to.

Geologic and Water Resources

This proposal is considered to be consistent with those State goals, policies, objectives, plans, programs and fiscal resources with which this division is concerned.

Office of Planning and Research

The office of Planning and Research has deferred its review of this project to the Game and Fish Division but wishes to state its support for the points they have made.

RHS:ct

pages tightly bound

Department of Natural Resources

270 WASHINGTON STREET, S.W.
ATLANTA, GEORGIA 30334
(404) 656 3500

Joe D. Tanner
COMMISSIONER

Charles M. Parrish, III
EXECUTIVE ASSISTANT

July 13, 1976

M E M O R A N D U M

TO: Chuck Badger, Administrator
State Clearinghouse

FROM: Ray Siewert, Coordinator
Comprehensive Review

ISSUE: Addendum Comments for State Clearinghouse
Control Number 76-05-20-03

APPLICANT: Corps of Engineers

PROJECT: Channel Widening for Navigation, Savannah Harbor

Comments

The following comment was not included in our initial position since it required additional coordination. Please forward these concerns to the Savannah Corps of Engineers.

We note on page three, paragraph 106, that the Corps of Engineers proposes to use a bucket dredge and barge for dredging and disposal. Because of the tremendous volume of silt, heavy metals and other potentially biologically deleterious substances to be stirred up, we are concerned about the possible impact on adjacent floral or faunal communities.

It seems probable that the massive quantities of silt created by this type of operation will have significant adverse effects on estuarine or benthic biota. Although organisms native to Savannah Harbor have evolved under conditions of high silt transport and can be expected to withstand or recolonize after periods of inordinately high siltation, this recolonization is impeded by a less than optimum substrate in which organisms might find attachment. The dredging operation, while removing large particulate from the bottom, resuspend fine particles to settle elsewhere. The "fines" impede the respiration of various estaurine organisms as well as create substrate which is often unsuitable for attachment of many benthic species.

In view of this, we recommend that the Corps consider using a hydraulic dredge with cutter head in lieu of the proposed bucket dredge. This would

cc: Jim Setser
Claude Hastings
Bill Clark
Lonice Barrett
Gordon Harrison

(see additional attached page)

considerably reduce the adverse impacts described above.

RHS/esd

TO: STATE CLEARINGHOUSE
OFFICE OF PLANNING AND BUDGET
INTERGOVERNMENTAL RELATIONS DIVISION
270 WASHINGTON STREET, S. W.
ATLANTA, GEORGIA 30334

FROM: NAME: Mr. Lewis Parker, Deputy Director

AGENCY: Department of Transportation

SUBJECT: STATE-LEVEL REVIEW OF THE NEGATIVE DECLARATION/ENVIRONMENTAL ASSESSMENT OR DRAFT/FINAL ENVIRONMENTAL IMPACT STATEMENT PREPARED FOR THIS PROJECT

STATE CLEARINGHOUSE CONTROL NUMBER: 76-05-20-03

DATE: June 23, 1976

This project is considered to be consistent with those State social, economic, physical (goals), (policies), (objectives), (plans), and (programs), with which this organization is concerned. (Line through inappropriate word or words). ________

This project is recommended for further development with the following recommendations for strengthening the project (additional pages may be used for outlining the recommendations). ________

This project is not recommended for further development (accompanied by detail comments which explains the Division's rationale for this decision). ________

Approval must be obtained from the Maintenance Engineer of the Georgia Department of Transportation before any earthwork is accomplished in the vicinity of the foundation of the Talmadge Memorial Bridge (U.S. 17 Alt.)

Mr. F. A. Childers
Maintenance Engineer
Georgia Department of Transportation
2 Capitol Square
Atlanta, Georgia 30334

O. H. Roberts
for
Lewis Parker

OHR:NAW/hrg

Date: May 28, 1976

Mr. Freeman G. Cross, Jr.
Department of the Army
Savannah Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

RECEIVED
JUN 1 1976
OFFICE OF PLANNING AND BUDGET

FROM: Name: Patrice Jackson

Title: A-95 Review Coordinator

Areawide Clearinghouse: Coastal APDC

SUBJECT: RESULTS OF REVIEW

Applicant: Savannah Corps of Engineers

Project: Draft Environmen-al Statement for Channel Widening for Navigation Savannah Harbor

State Clearinghouse Control Number: 76-05-20-03

Areawide Clearinghouse Staff Contact: Patrice Jackson

The Areawide review of the above-referenced proposal has been completed. This proposal has been found to be consistent with Areawide goals, objectives, policies, plans, programs and fiscal resources.

Additional comments: None

Joe D. Tanner
COMMISSIONER

Charles M. Parrish, III
DIVISION DIRECTOR

Department of Natural Resources

OFFICE OF PLANNING AND RESEARCH
STATE ARCHAEOLOGIST
MARTHA MUNRO HALL
WEST GEORGIA COLLEGE
CARROLLTON, GEORGIA 30117
(404) 834-6690
(404) 656-6881

July 23, 1976

Mr. H. T. DeRigo
Department of the Army
Savannah District, Corps of Engineers
Post Office Box 889
Savannah, Georgia 31402

Dear Herb:

Re: Corps of Engineers, Channel Widening for Navigation,
Savannah Harbor - CCN: 76-05-20-03

As I stated in our telephone conversation of July 22, we have reviewed the Corps' plans for the Savannah Harbor project and find them to be consistent with the goals and policies of this office.

It was good to hear that you have been successful in contracting for the magnetometer survey and the land areas survey. We will be looking forward to hearing the results of these surveys.

If we can be of further assistance, please feel free to contact us.

Sincerely,

David M. Sherman
State Historic Preservation Officer

DMS/mlr

CHATHAM COUNTY MOSQUITO CONTROL COMMISSION

THOMAS H. GUERRY, JR., *Chairman*
WILLIAM C. FLEETWOOD, *Vice-Chairman*
MARIAN D. SCOTT, *Secretary-Treasurer*
CURTIS V. COOPER, *Commissioner*
BOBBY F. HERNDON, *Commissioner*
WILBUR D. LUNDQUIST, M.D., *Commissioner*
WILLARD J. TESTON, *Commissioner*
JOSEPH F. FREWER, *Technical Advisor*
JOSEPH A. LOGAN, COL., *Technical Advisor*
HERBERT F. SCHOOF, Ph.D., *Technical Advisor*

1321 EISENHOWER DRIVE
SAVANNAH, GEORGIA 31406
Phone 355-8320

THOMAS O. FULTZ, JR., *Director*
DARRELL R. MADDOCK, *Asst. Director*

August 5, 1976

Mr. Herbert DeRigo
U. S. Army Corps of Engineers
P. O. Box 889
Savannah, Georgia 31402

Dear Mr. DeRigo:

This letter is in reply to our recent telephone conversation regarding the Perry Lane Box area, east of Savannah, as a possible hydraulic dredge disposal area.

The Chatham County Mosquito Control Commission has had important mosquito breeding problems located in this site. Extensive physical controls were installed during 1965 and 1966. These were basically a series of interconnecting canals to provide mosquito-eating fish better access, to dilute the occasional sewage intrusion, and to allow better spray vehicle coverage.

The major problem has been largely corrected, but some mosquito breeding still occurs.

The more important mosquitoes collected from this area have been Culex quinquefasciatus and Culex salinarius. These species are polluted water breeders and have been incriminated as vectors during recent outbreaks of St. Louis Encephalitis in other southern states. Occasionally, a few fresh flood water mosquitoes have been collected from higher depressions following heavy rains.

The filling and elevation of this area, provided proper grades and drains are constructed, should further reduce the mosquito breeding.

It is possible, during the pumping intervals of the project, that temporary breeding sites could develop; however, these should be minor, and the Mosquito Control Commission can provide temporary controls if such a mosquito problem arises. Final grading can correct any surface breeding.

Sincerely yours,

Thomas O. Fultz, Jr.
Director

TOF/mv

APPENDIX E

Letters Received by the Chief of Engineers as a Result of Coordination of the Revised Draft Environmental Statement.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30308

November 14, 1977
Lieutenant General J. W. Morris, USA
Chief of Engineers
Washington, D. C. 20314

Dear General Morris:

We have reviewed the revised Draft Environmental Impact Statement on the channel widening of Savannah Harbor. This Statement responded satisfactorily to our previous comments and, as such, we have rated it LO, lack of significant environmental objections, and 1, no further information is requested.

If we can be of further assistance, feel free to call on us.

Sincerely yours,

for John A. Little, Deputy
John C. White
Regional Administrator

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-77/877

Lieutenant General J. W. Morris
Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear General Morris:

Thank you for the letter of September 6, 1977, requesting our views and comments on the Chief of Engineers' Report and the revised draft environmental statement for Savannah Harbor, Chatham County, Georgia. We have reviewed the documents and conclude that they adequately consider those areas within our jurisdiction and expertise. Several brief comments follow:

Chief of Engineers' Report

We have no objection to the proposed plan for widening of part of the Savannah Harbor Ship Channel. We do, however, request that the Savannah District Engineer coordinate closely with the Jacksonville, Florida, Area Office of our Fish and Wildlife Service during the detailed planning and construction stages. The proposal to widen the channel comes in addition to several other Corps of Engineers' projects in Savannah Harbor in recent years. These projects, in conjunction with possible future works, could have a cumulative adverse impact on fish migration, wetlands, and the Savannah National Wildlife Refuge.

It is noted that the Chief of Engineers concurred with the recommendation of the Board of Engineers that post-authorization planning should take place to investigate realignment of the channel. (Presently, structures on the south side are not set back sufficiently and docked vessels extend into the existing channel creating a navigational hazard.) We see no need for channel realignment, once the channel widening is completed, since the work would take place by dredging on the north side of the present channel. The purpose of widening is to compensate for the narrow channel. Therefore, once the channel work is completed, this problem should be alleviated. Reasons for expanding the study should be further detailed in the final documents.

Revised Draft Environmental Statement

With the exception of the specific items discussed below, the revised draft environmental statement satisfactorily addresses our comments on the earlier draft statement.

Page 2, paragraph 1.04 - The geographic limits of reaches 1 through 5 should be delineated here and on plate 1.

Page 25, paragraph 4.13 - The Department, in a July 1, 1976, letter concerning the draft statement, commented on what it believes to be an inappropriate reference for predicting recovery and recolonization of benthic populations following channel enlargement; that is, Impact of Intracoastal Waterway Maintenance Dredging on a Mud Bottom Benthos Community, by Stickney and Perlmutter, 1975. Our opinion is based on the limited scope of the study, the variability of the data, site specificity, and other major differences in conditions between the Savannah Harbor site and the Stickney-Perlmutter study site. Furthermore, Stickney and Perlmutter were misquoted as stating that post dredging diversity values "...are higher than those observed before dredging occurs." The Environmental Protection Agency, in their July 23, 1976, comments on the draft statement, also expressed concern over the use of this reference. We note that this section in the revised draft statement remains unchanged from the original draft. The response to the Environmental Protection Agency's comment (page 37, paragraph 9.13) does not alleviate our objection to the use of the Stickney-Perlmutter study.

We therefore wish to reaffirm our opinion of the referenced study.

We hope these comments will be of assistance to you.

Sincerely,

Acting
Deputy Assistant SECRETARY

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secret / for Science and Technology
Washington, D.C. 20230
(202) 377-3111

November 23, 1977

Colonel James N. Ellis
Office of the Chief of Engineers
Department of the Army
Washington, D. C. 20314

Dear Colonel Ellis:

This is in reference to your revised draft environmental statement entitled, "Channel Widening for Navigation, Savannah Harbor, Georgia." The enclosed comment from the National Oceanic and Atmospheric Administration is forwarded for your consideration.

Thank you for giving us an opportunity to provide this comment, which we hope will be of assistance to you. We would appreciate receiving eight (8) copies of the final statement.

Sincerely,

Sidney R. Galler

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

Enclosure Memo from: Gordon Lill
Deputy Director
National Ocean Survey

U.S. DEPARTMENT COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C52/JLR

NOV 1 5 1977

TO: William Aron
Director
Office of Ecology and Environmental Conservation

Gordon Lill

FROM: Gordon Lill
Deputy Director
National Ocean Survey

SUBJECT: DEIS #7709.15 - Channel Widening for Navigation
Savannah Harbor, Georgia

The subject statement has been reviewed within the areas of NOS responsibility and expertise, and in terms of the impact of the proposed action on NOS activities and projects.

The following comments are offered for your consideration.

On page 7, paragraph 2.15, data on hydrology agree with our tide table information with the exception of the 7.9 feet average at mile 21.3. This should be 7.0 feet.

Geodetic control survey monuments may be located in the proposed project area. If there is any planned activity which will disturb or destroy these monuments, NOS requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS monuments.

STATEMENT OF FINDINGS
CHANNEL WIDENING FOR NAVIGATION
SAVANNAH HARBOR, GEORGIA

1. As District Engineer, Savannah District, Corps of Engineers, it is my duty to review and evaluate, in light of the overall public interest, the various documents concerning the proposed widening of Savannah Harbor, including all comments received in coordination of the Environmental Statement. I have considered all practicable alternatives including the alternative to forego the project. The recommended plan of improvement provides for widening the Savannah Harbor navigational channel between the present upstream limit of the 500-foot channel between Fig Island turning basin (mile 13.3) and Kings Island turning basin (mile 18.9) from 400 to 500 feet. The Committee on Public Works of the House of Representatives, United States, adopted a resolution on 10 July 1968 authorizing the study to determine the advisability of widening the channel between the present limit of the 500-foot channel and Seaboard Coast Line Railroad Bridge. Subsequently, on 13 January 1972, the Chief of Engineers approved an increase in the scope of the widening study to include that part of the navigation channel between the Seaboard Coast Line Railroad and Kings Island turning basin.

2. The possible consequences of the proposed project and its alternatives have been studied for environmental, social well-being, and engineering effects, including regional and national economic development and engineering feasibility. Other factors bearing on my review include effects on archeological and historical sites, water quality, wildlife, and aquatic resources, and rare or endangered species.

3. In evaluating whether the proposed project should be implemented, the following points were considered pertinent:

a. Environmental considerations include temporary increase in turbidity and suspended solids, disruption of benthic populations, destruction of existing vegetation on 309 acres in disposal areas, and elimination of approximately 27 acres of highland.

b. Social considerations include the increased capability of Savannah Harbor to safely accommodate ocean-going vessels. Failure to implement the proposed project would result in eventual limitation of the harbor's ability to accept increased vessel traffic.

c. Economic considerations include continuous use of the harbor to ensure economic growth of the City of Savannah and surrounding regions.

4. I have evaluated the proposed project in light of the considerations and guidelines set forth pursuant to Section 404(b) of the Federal Water Pollution Control Act Amendments of 1972. I find that there are no feasible practicable alternatives that will have less adverse impact on the aquatic and semi-aquatic ecosystem and that there will be no long-term unacceptable environmental impacts as a result of the dredged material disposal. The discharge of the dredged material will be accomplished under conditions which will minimize, to the extent practicable, the adverse environmental effects. I find that the disposal sites for the widening for Navigation of Savannah Harbor, Georgia, have been specified through the application of the Section 404(b) Guidelines.

5. I find that the channel widening of Savannah Harbor for navigation, as developed in the Environmental Statement, is based on a thorough analysis and evaluation of various practicable alternative courses of action for achieving the stated objectives; that wherever adverse effects are found to be involved, they cannot be avoided by following reasonable alternative courses of action which would achieve the congressionally specified purposes; that where the proposed action has adverse effect, this effect is either ameliorated or substantially outweighed by other considerations of national policy; that the recommended action is consonant with national policy, statutes, and administrative directives; and that, the total public interest should best be served by implementation of the proposed channel widening of Savannah Harbor.

12 July 1978
(Date)

Tilford C. Creel
TILFORD C. CREEL
Colonel, Corps of Engineers
District Engineer

I have reviewed the Statement of Findings and concur with the recommendations of the District Engineer.

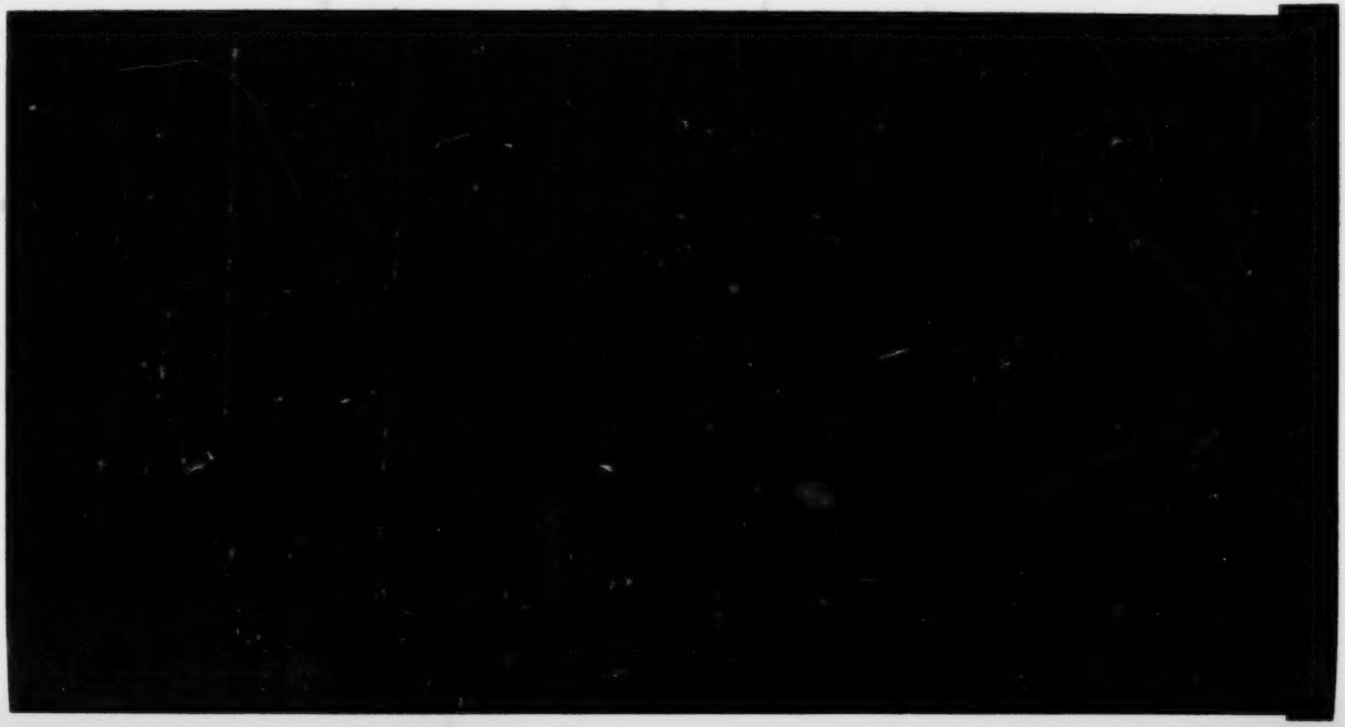
28 July 1978
(Date)

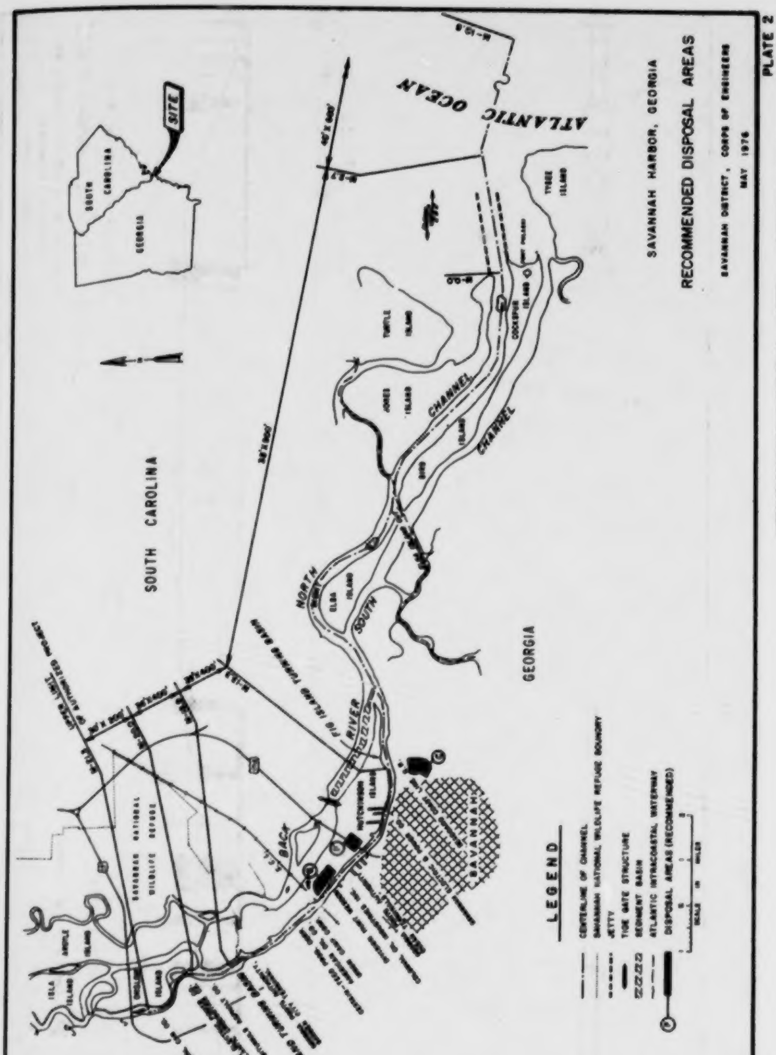
Marvin W. Rees
MARVIN W. REES
Colonel, Corps of Engineers
Acting Division Engineer

23 AUGUST 1978
(Date)

HUGH G. ROBINSON
Brigadier General, USA
Deputy Director of Civil Works

ILLUSTRATION ACCOMPANYING THE REPORT OF THE DISTRICT ENGINEER





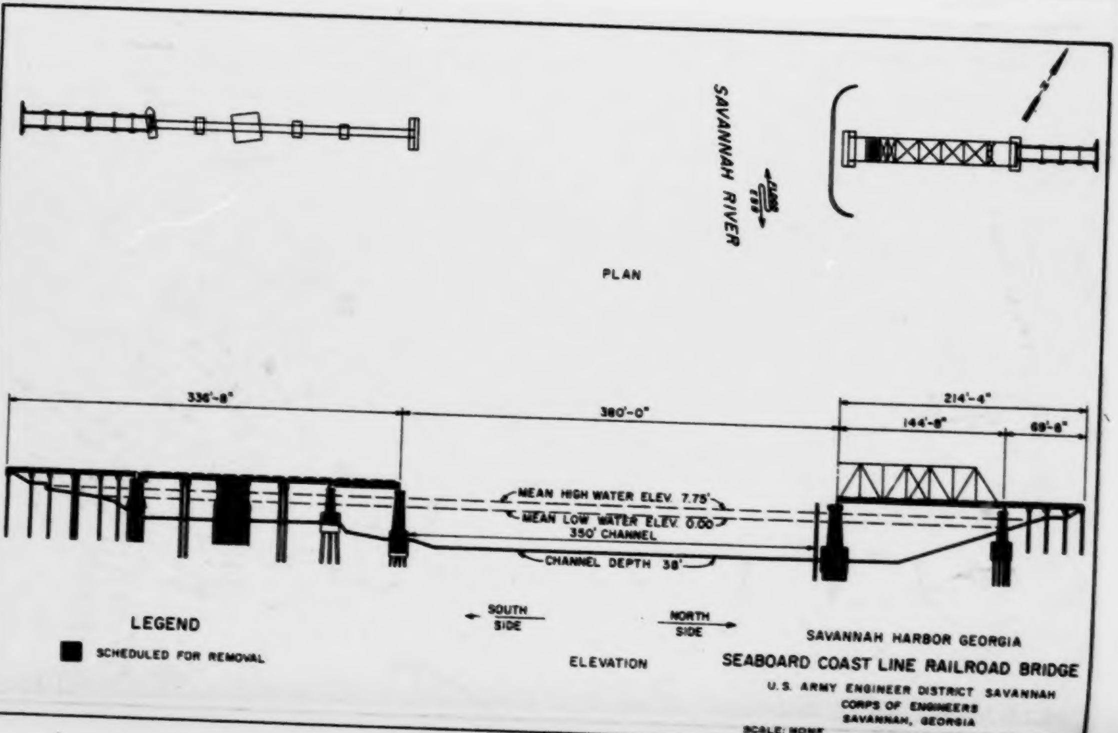
SAVANNAH HARBOR, GEORGIA

RECOMMENDED DISPOSAL AREAS

SAVANNAH DISTRICT, CORPS OF ENGINEERS

MAY 1976

PLATE 2



SAVANNAH HARBOR GEORGIA

SEABOARD COAST LINE RAILROAD BRIDGE

U.S. ARMY ENGINEER DISTRICT SAVANNAH
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SCALE: NONE

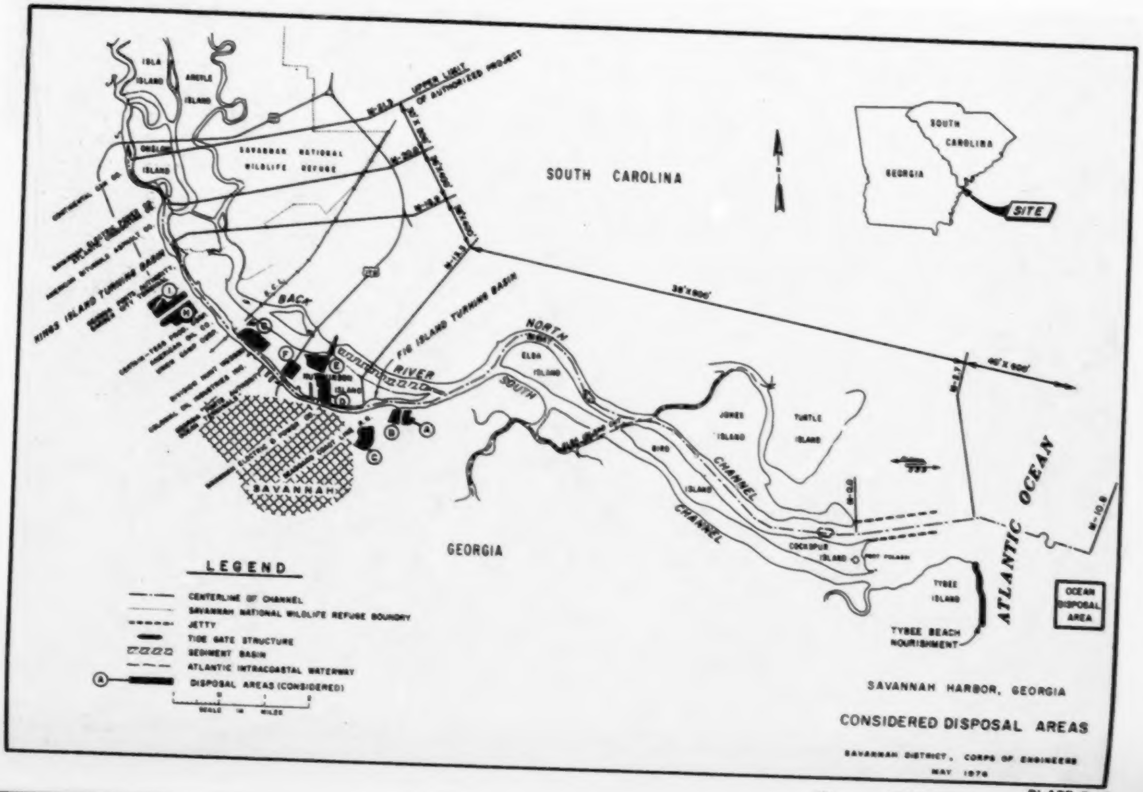
PLATE C-1

BROAD (454) 22-648

PLATE 11-1

PLATE [illegible]

ISLAND
BASIN
CITY

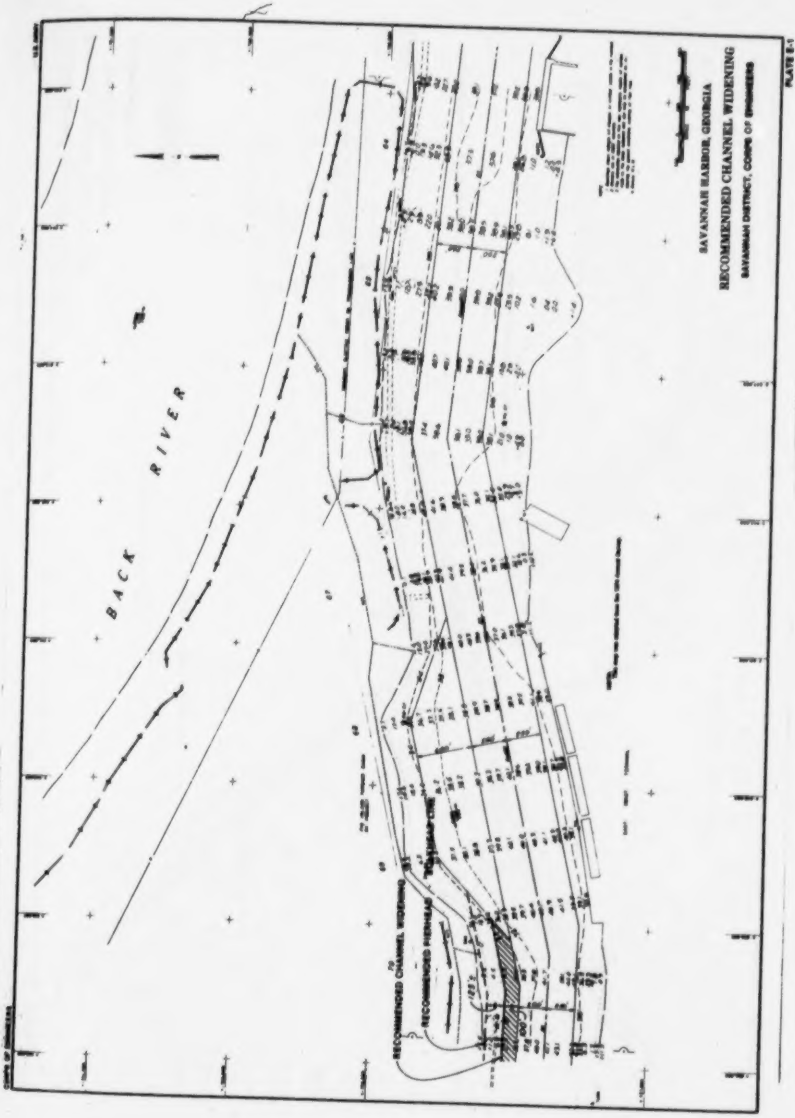


SAVANNAH HARBOR, GEORGIA

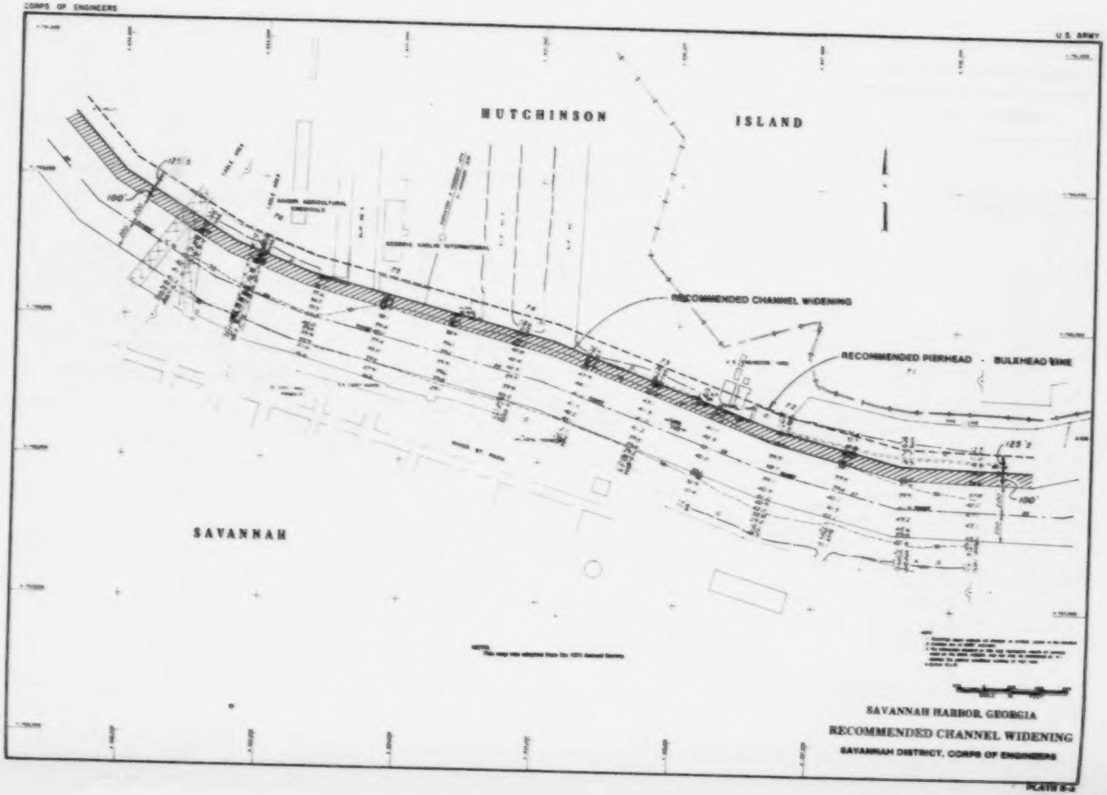
CONSIDERED DISPOSAL AREAS

SAVANNAH DISTRICT, CORPS OF ENGINEERS
MAY 1976

PLATE D-4



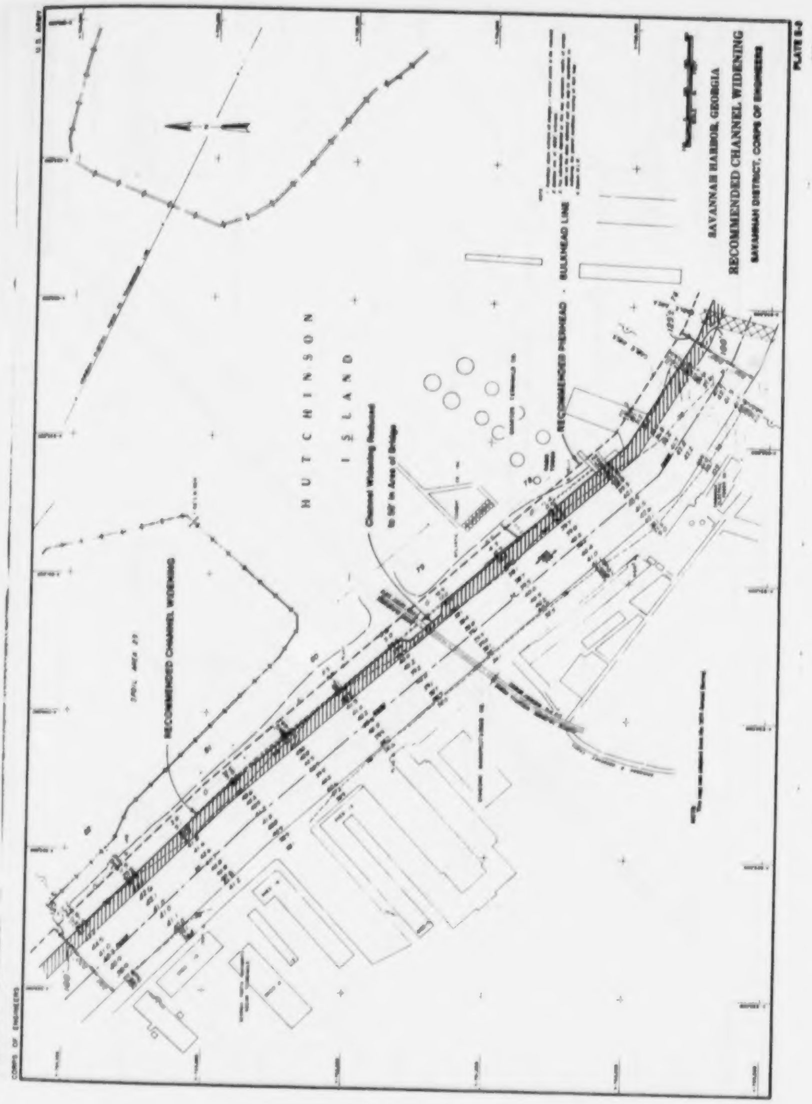
BACK RIVER
RECOMMENDED CHANNEL WIDENING
RECOMMENDED PIERHEAD
BULKHEAD LINE
SAVANNAH HARBOR, GEORGIA
RECOMMENDED CHANNEL WIDENING
SAVANNAH DISTRICT, CORPS OF ENGINEERS
PLATE E-1


CORPS OF ENGINEERS
U.S. ARMY
HUTCHINSON ISLAND
SAVANNAH
RECOMMENDED CHANNEL WIDENING
RECOMMENDED PIERHEAD - BULKHEAD LINE
100'
125'±

SAVANNAH HARBOR, GEORGIA

RECOMMENDED CHANNEL WIDENING

SAVANNAH DISTRICT, CORPS OF ENGINEERS

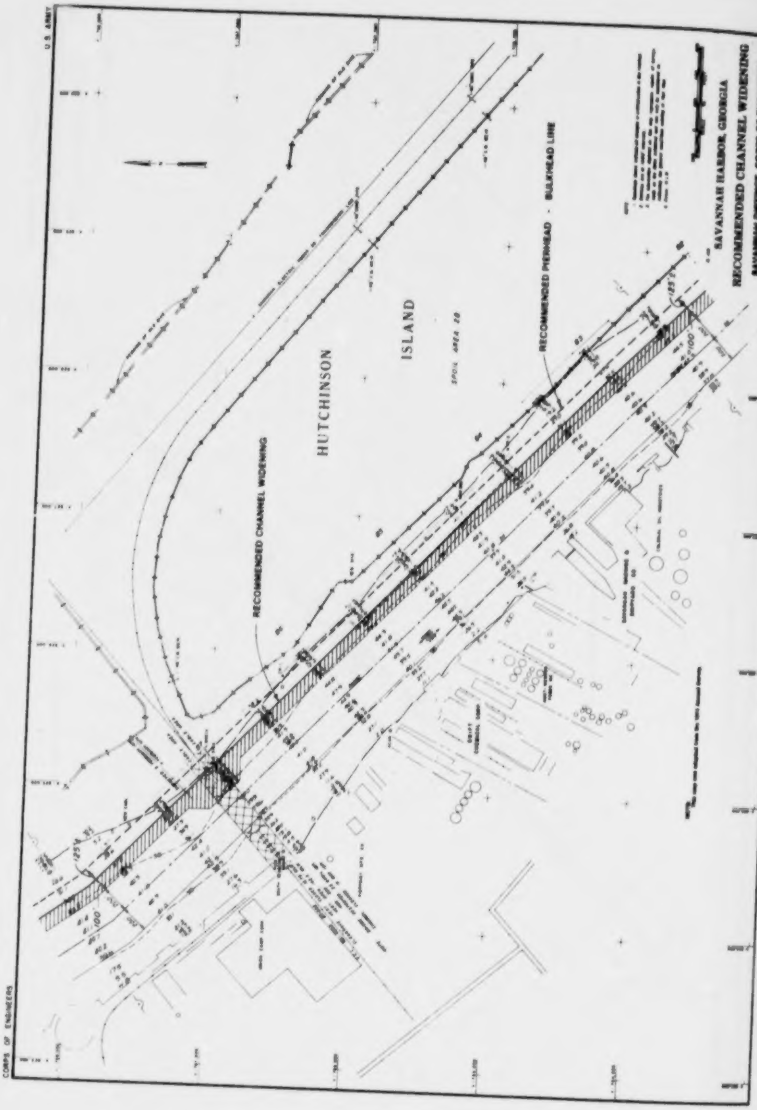

U.S. ARMY
CORPS OF ENGINEERS
HUTCHINSON ISLAND
RECOMMENDED CHANNEL WIDENING
Channel Widening Reduced to 50' in Area of Bridge
RECOMMENDED PIERHEAD - BULKHEAD LINE

SAVANNAH HARBOR, GEORGIA

RECOMMENDED CHANNEL WIDENING

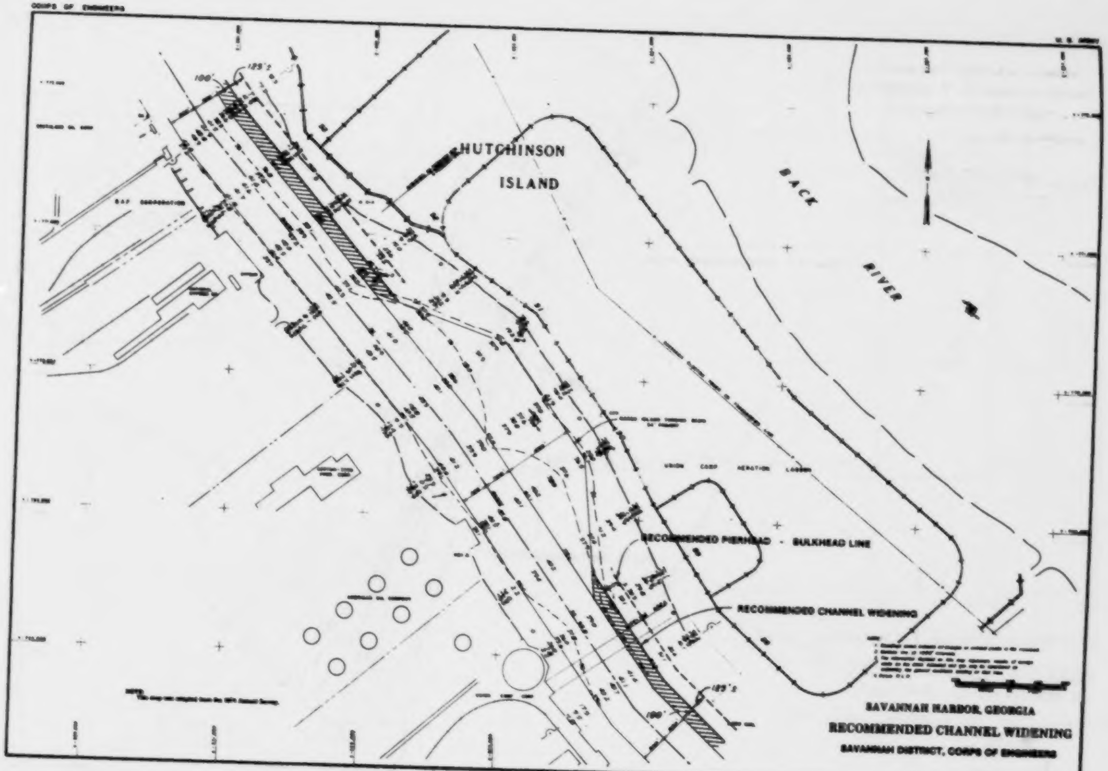
SAVANNAH DISTRICT, CORPS OF ENGINEERS

PLATE 9-2



CORPS OF ENGINEERS
U.S. ARMY
HUTCHINSON
ISLAND
SPOIL AREA 28
RECOMMENDED CHANNEL WIDENING
RECOMMENDED PIERHEAD - BULKHEAD LINE

SAVANNAH HARBOR, GEORGIA
RECOMMENDED CHANNEL WIDENING
SAVANNAH DISTRICT, CORPS OF ENGINEERS


CORPS OF ENGINEERS
U. S. ARMY
HUTCHINSON ISLAND
BACK RIVER
RECOMMENDED PIERHEAD - BULKHEAD LINE
RECOMMENDED CHANNEL WIDENING
UNION CORP AERATION LAGOON
100'
125'±

SAVANNAH HARBOR, GEORGIA

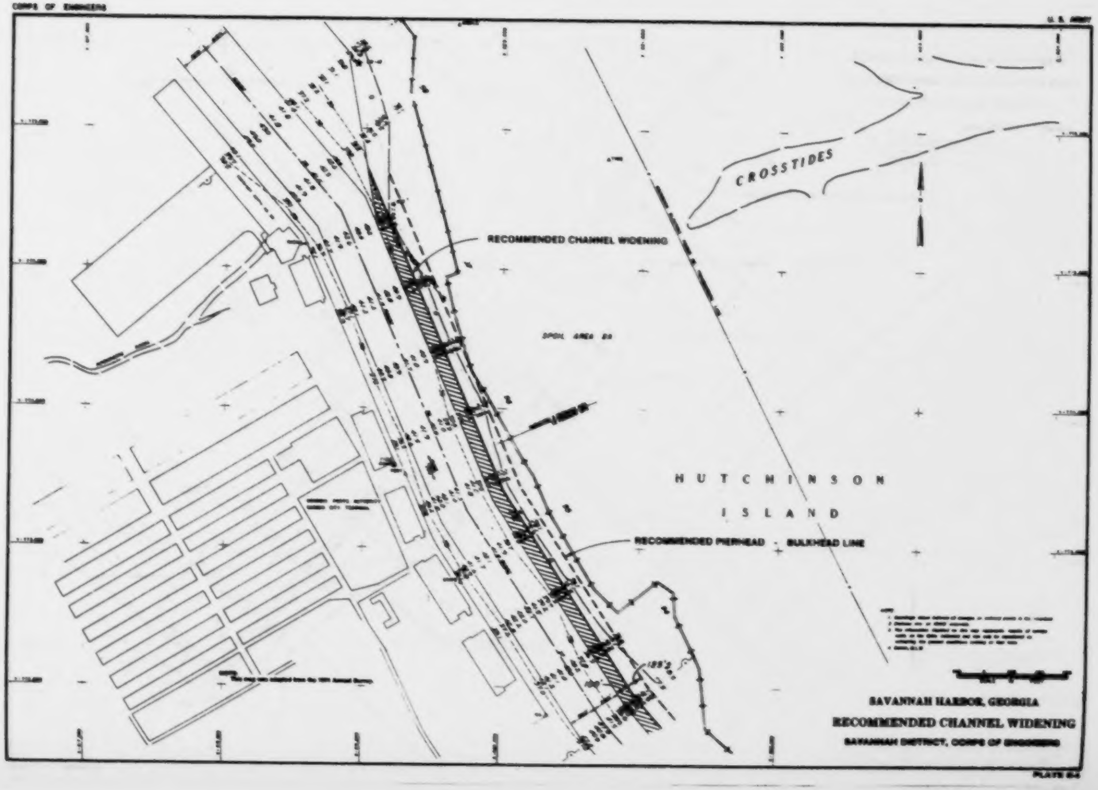
RECOMMENDED CHANNEL WIDENING

SAVANNAH DISTRICT, CORPS OF ENGINEERS

PLATE B-6

CORPS OF ENGINEERS

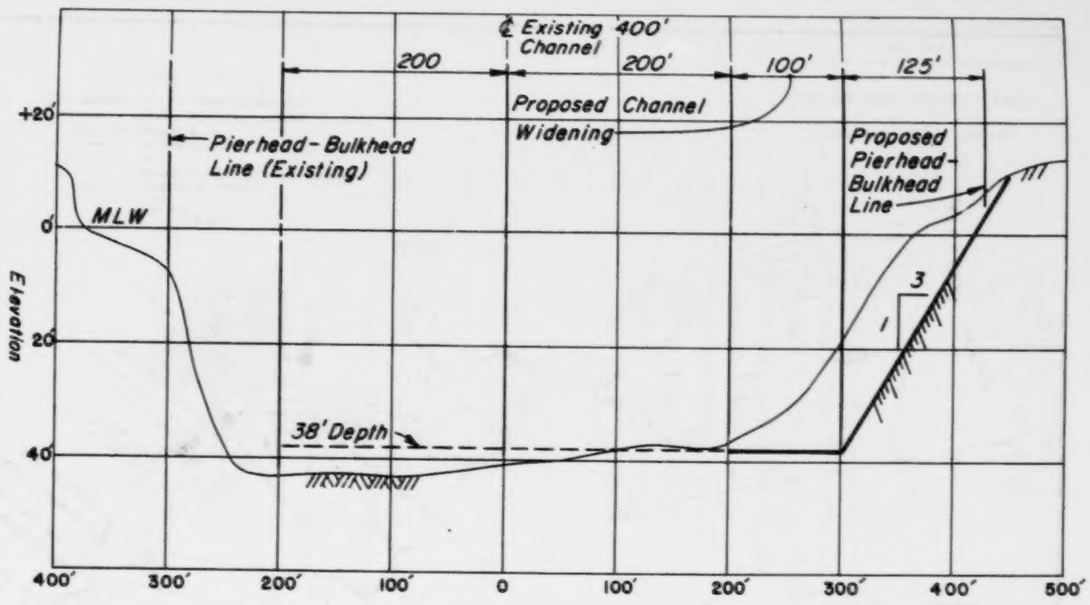
U. S. ARMY


CROSSTIDES
RECOMMENDED CHANNEL WIDENING
SPOIL AREA 23
HUTCHINSON
ISLAND
RECOMMENDED PIERHEAD - BULKHEAD LINE

SAVANNAH HARBOR, GEORGIA

RECOMMENDED CHANNEL WIDENING

SAVANNAH DISTRICT, CORPS OF ENGINEERS

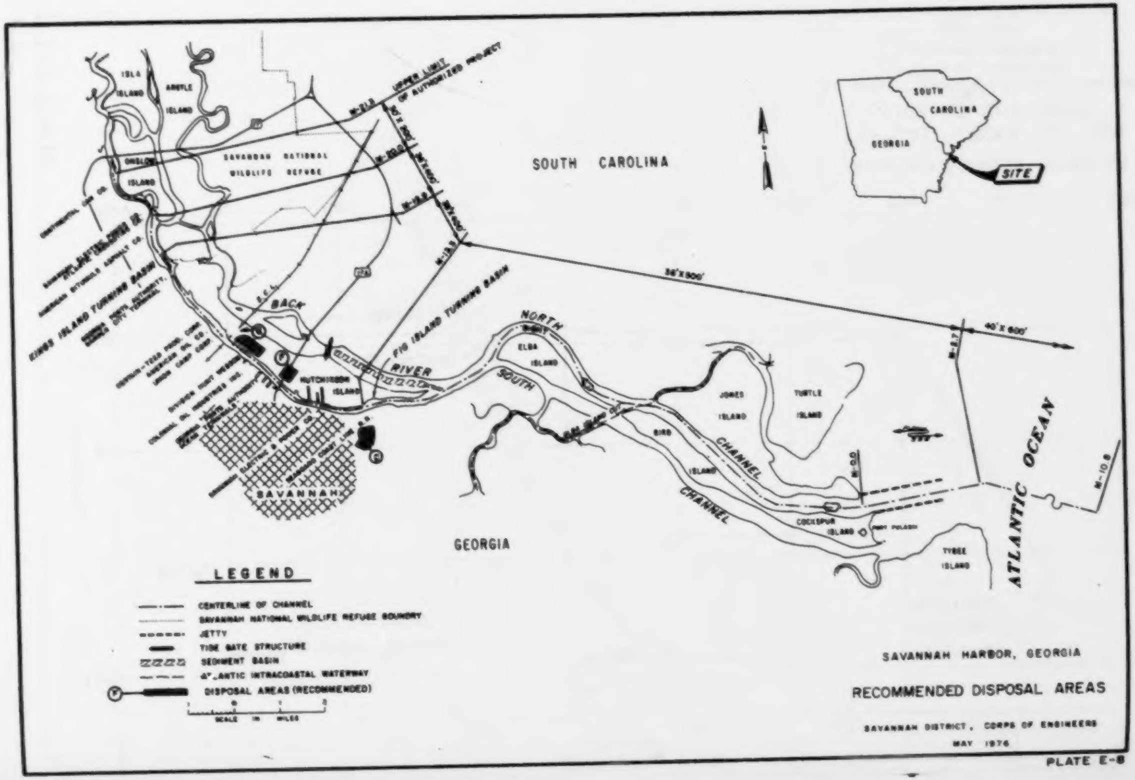


SAVANNAH HARBOR WIDENING

TYPICAL CROSS SECTION
LOOKING UPSTREAM

U.S. ARMY ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
SAVANNAH, GEORGIA
JULY 1976

PLATE E-7



SAVANNAH HARBOR, GEORGIA

RECOMMENDED DISPOSAL AREAS

SAVANNAH DISTRICT, CORPS OF ENGINEERS
MAY 1976

PLATE E-8

PROPERTY OWNERS
AFFECTED BY WIDENING[1]

Assigned reference no.	Owner
1	Savannah Port Authority
2	Georgia Ports Authority
3	United States of America (Engineer Yard)
4	Savannah Port Authority (part of #1)
5	Mountain Properties Inc.
6	Kaiser Aluminum & Chemical
7	Seaboard Coast Line Railroad
8	Charter International Oil
9	Colonial Oil Industries
10	WEAS Inc.
11	Seaboard Coast Line Railroad (part of #7)
12	Atlantic Cement Co. Inc.
13	Seaboard Coast Line Railroad (part of #7)
14	Georgia Pacific Corp.
15	Mohawk Steel Company Inc.
16	Diamond Manufacturing Co.
17	Savannah Machine & Shipyard Co.
18	Union Camp Corp.
19	Seaboard Coast Line Railroad
20	Development Authority of Chatham County
21	Rourkes Iron Works
22	Savannah Port Authority

[1] See following plates for location.

Plate E-9

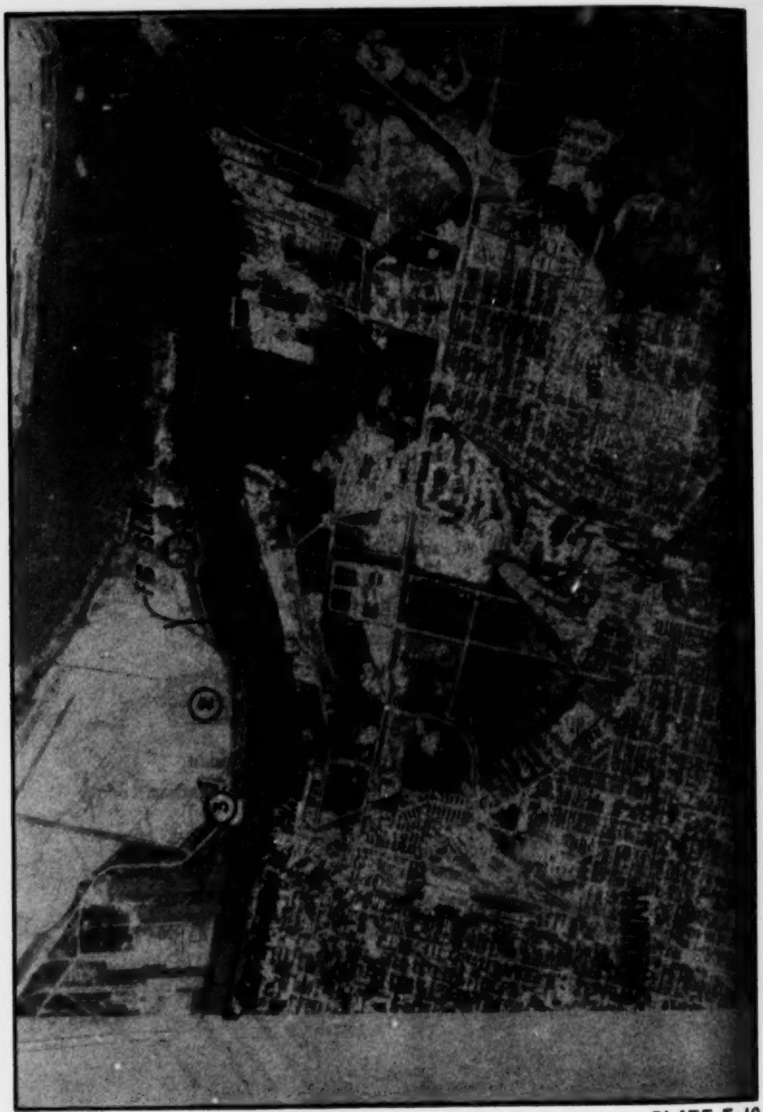
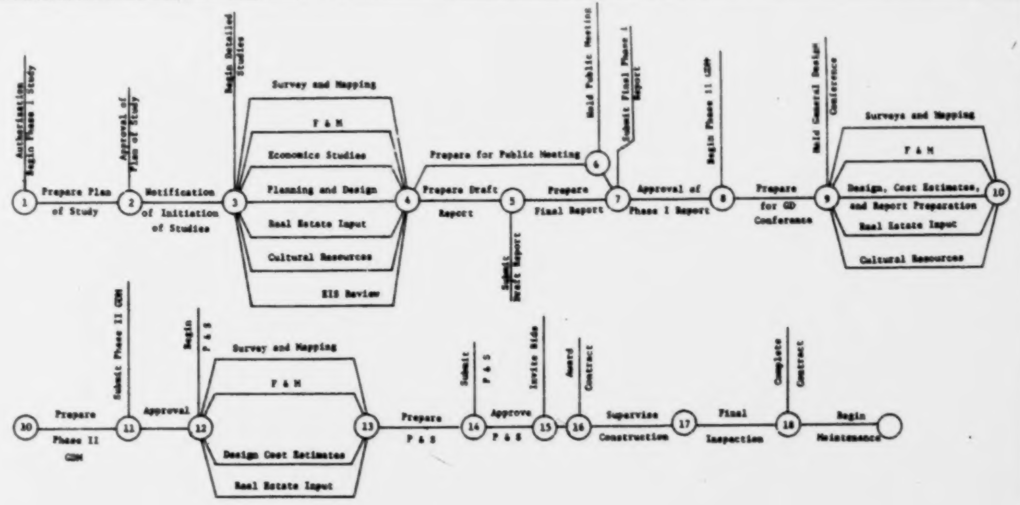


PLATE E-10

PLATE E-11

PLATE E - 12



LEGEND

STEPS			TIME (MONTHS)	FUNDING
1	-	7	12	86,000
8	-	11	8	148,000
12	-	14	2	190,000
15	-	18	22	Construction

SAVANNAH HARBOR
WIDENING

CPM FOR
AE & D AND CONSTRUCTION

PLATE E-13

98th Congress, 1st Session - - - - - - - House Document No. 98–83

SUPPLEMENTAL APPROPRIATIONS

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

PROPOSED SUPPLEMENTAL APPROPRIATIONS FOR THE FISCAL YEAR 1983 AND AMENDMENTS TO THE REQUEST FOR APPROPRIATIONS FOR FISCAL YEAR 1984

JULY 13, 1983.—Referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11–012 O
WASHINGTON : 1983

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

THE WHITE HOUSE
WASHINGTON

July 13, 1983

The Speaker of the
House of Representatives

Sir:

I ask the Congress to consider requests for supplemental appropriations for fiscal year 1983 in the amount of $118,000,000 in budget authority and amendments to the request for appropriations for fiscal year 1984 in the amount of $1,150,000 in budget authority.

The details of these proposals are set forth in the enclosed letter from the Director of the Office of Management and Budget. I concur with his comments and observations.

Respectfully,

Ronald Reagan

Enclosures

Estimate No. 12
98th Congress, 1st Session

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

July 13, 1983

The President

The White House

Sir:

I have the honor to submit for your consideration requests for supplemental appropriations for fiscal year 1983 in the amount of $118,000,000 and amendments to the request for appropriations for fiscal year 1984 in the amount of $1,150,000.

I have carefully reviewed the proposals contained in this document and am satisfied that these requests are necessary at this time. I recommend, therefore, that these proposals be transmitted to the Congress.

Respectfully,

David A. Stockman

David A. Stockman
Director

Enclosures

Legislative Branch
Architect of the Capitol

1984 Budget Appendix Page	Heading	1984 Request Pending	1984 Proposed Amendment	1984 Revised Request
I-A10	Library buildings and grounds, structural and mechanical care (In the appropriation language under the above heading delete "$100,000" and insert in lieu there of $1,250,000).	$5,260,000	$1,150,000	$6,410,000

This proposal would increase 1984 outlays by $900 thousand.

DEPARTMENT OF AGRICULTURE
Child Nutrition Programs

For an additional amount for "Child nutrition programs", $118,000,000.

This increase is needed to fund a higher than expected level of meal reimbursement claims. This proposal would increase 1983 outlays by $111.3 million.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

1984 Budget Appendix Page	Heading	1984 Budget Request Pending	1984 Proposed Amendment	1984 Revised Request
I-Q15	Administration, research, and special projects	$40,736,000	$-854,000*	$39,882,000
	(In the appropriation language under the above heading, delete "$40,736,000" and insert in lieu thereof $39,882,000, together with $6,279,000 for payment to the Secretary of the Treasury for debt reduction to remain available until expended,)			

This proposal would provide for the repayment of borrowing from the Treasury Department that was used to pay the cumulative interest on promissory notes. This is an inter-agency transaction and would not affect total outlays.

* This schedule reflects the net reduction in Department of Transportation appropriations resulting from the retirement of the debt owed by the Federal Railroad Administration to the Treasury.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

1984 Budget Appendix Page	Heading	1984 Budget Request Pending	1984 Proposed Amendment	1984 Revised Request
I-Q19	Settlements of railroad litigation	—	($283,754,000)	($283,754,000)*
	(Under the above heading, insert: For liquidation of promissory notes sold to the Secretary of the Treasury pursuant to Section 210(f) of the Regional Rail Reorganization Act of 1973 (Public Law 93-236) as amended, $283,754,000, to remain available until expended.)			

The proposed amendment would provide for the repayment of borrowing from the Treasury Department that was used to pay interest in previous years. This interest was orginally incurred as a result of borrowing to cover settlements of railroad litigation. This is an inter-agency transaction and would not affect total outlays.

* Appropriations to repay debt

VETERANS ADMINISTRATION
Medical Care

Notwithstanding section 401 of Public Law 97-272, obligations in Fiscal Year 1983 for employee travel and transportation may not exceed $6,200,000.

This appropriation language request would increase the employee travel limitation by $.9 million to permit travel for training and other purposes. This proposal would not affect outlays.

○

98th Congress, 1st Session - - - - - - - House Document No. 98–84

CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS FOR 1983

COMMUNICATION

FROM

THE DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT

TRANSMITTING

A CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS OF BUDGET AUTHORITY AS OF JULY 1, 1983, PURSUANT TO SECTION 1014(e) OF PUBLIC LAW 93–344

JULY 13, 1983.—Referred to the Committee on Appropriations and ordered to be printed

---

U.S. GOVERNMENT PRINTING OFFICE
11–012 O WASHINGTON : 1983

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

1528

JUL 8 1983

Honorable Thomas P. O'Neill
Speaker of the House of
Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

In accordance with Executive Order 11845, I am transmitting the cumulative report required by Section 1014(e) of the Congressional Budget and Impoundment Control Act of 1974. In accordance with the Act, the report is also being transmitted to the Senate and will be published in the Federal Register.

Sincerely,

David A. Stockman
Director

Enclosures

RECEIVED
1982 JUL 11 PM 1:13

IDENTICAL LETTER SENT TO THE PRESIDENT OF THE SENATE

CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS

July 1, 1983

This report is submitted in fulfillment of the requirements of Section 1014(e) of the Impoundment Control Act of 1974 (Public Law 93-344). Section 1014(e) provides for a monthly report listing all budget authority for this fiscal year with respect to which, as of the first day of the month, a special message has been transmitted to the Congress.

This report gives the status as of July 1, 1983 of 20 rescission proposals and 75 deferrals contained in the first eight special messages of FY 1983. These messages were transmitted to the Congress on October 1, and December 7, and 16, 1982, and January 5, February 1, March 9, April 21,and May 19, 1983.

Rescissions (Table A and Attachment A)

Twenty rescission proposals totaling $1,554 million are currently pending before the Congress. Table A summarizes the status of rescissions proposed by the President as of July 1, 1983, while Attachment A shows the history and status of each rescission proposed during FY 1983.

Deferrals (Table B and Attachment B)

As of July 1, 1983, $2,926.9 million in 1983 budget authority was being deferred from obligation and another $9.1 million in 1983 obligations was being deferred from expenditure. Attachment B shows the history and status of each deferral reported during FY 1983.

Information from special messages

The special messages containing information on the rescissions and the deferrals covered by the cumulative report are printed in the Federal Registers listed below:

Vol. 47, FR p. 44524, Thursday October 7, 1982
Vol. 47, FR p. 55602, Friday, December 10, 1982
Vol. 47, FR p. 57230, Wednesday, December 22, 1982
Vol. 48, FR p. 1266, Tuesday, January 11, 1983
Vol. 48, FR p. 5474, Friday, February 4, 1983
Vol. 48, FR p. 11244, Wednesday, March 16, 1983
Vol. 48, FR p. 18978, Tuesday, April 26, 1983
Vol. 48, FR p. 23374, Tuesday, May 24, 1983

TABLE A

STATUS OF 1983 RESCISSIONS

	Amount (In millions of dollars)
Rescissions proposed by the President....................	$1,554.0
Accepted by the Congress...............................	-0-
Rejected by the Congress...............................	-0-
Pending before the Congress.............................	$1,554.0 a

a. These rescission proposals are still considered to be pending before the Congress, even though the 45-day withholding period has expired.

****

TABLE B

STATUS OF 1983 DEFERRALS

	Amount (In millions of dollars)*
Deferrals proposed by the President......................	$13,508.4
Routine Executive releases (-$7240.1 million) and adjustments ($651.6 million) through July 1, 1983.........	-6,588.5
Overturned by the Congress..............................	-3,984.0
Currently before the Congress...........................	$ 2,936.0 a

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* Detail does not add to total due to rounding.

a. This amount includes $9.1 million in outlays for a Department of the Treasury deferral (D83-16B).

Attachments

PAGE 1

ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983

AS OF 07/01/83 17:07

AS OF JULY 1, 1983 AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
FUNDS APPROPRIATED TO THE PRESIDENT							
Appalachian Regional Development Programs							
Appalachian Regional Development programs							
BA	R83- 2		15,133	2 1 83		15,133	4 13 83
FUNDS APPROPRIATED TO THE PRESIDENT TOTAL BA			15,133			15,133	
DEPARTMENT OF AGRICULTURE							
Agricultural Research Service							
Buildings and facilities							
BA	R83- 3		1,927	2 1 83		1,927	4 13 83
Soil Conservation Service							
Watershed and flood prevention operations							
BA	R83- 4		68,995	2 1 83		68,995	4 13 83
Resource conservation and development							
BA	R83- 5		5,600	2 1 83		5,600	4 13 83
Agricultural Cooperative Service							
Salaries and expenses							
BA	R83- 6		779	2 1 83		779	4 13 83
DEPARTMENT OF AGRICULTURE TOTAL BA			77,301			77,301	
DEPARTMENT OF COMMERCE							

ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983

AS OF JULY 1, 1983

AS OF 07/01/83 17:07

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
National Oceanic and Atmospheric Administration								
Construction								
	BA	R83- 1		2,000	12 16 82		2,000	3 25 83
DEPARTMENT OF COMMERCE								
TOTAL BA				2,000			2,000	
DEPARTMENT OF EDUCATION								
Office of Elementary and Secondary Education								
Compensatory education for the disadvantaged	BA	R83- 7		133,925	2 1 83		133,925	4 13 83
School assistance in federally affected areas	BA	R83- 8		5,000	2 1 83		5,000	4 13 83
Special programs and populations	BA	R83- 9		56,639	2 1 83		56,639	4 13 83
Indian education	BA	R83- 10		16,128	2 1 83		16,128	4 13 83
Off. of Bilingual Educ. & Minority Lang. Affairs								
Bilingual eduation	BA	R83- 11		43,523	2 1 83		43,523	4 13 83
Office of Postsecondary Education								
Guaranteed student loans	BA	R83- 12		900,000	2 1 83		900,000	4 13 83
Higher and continuing education	BA	R83- 13		68,941	2 1 83		68,941	4 13 83

ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983

AS OF 07/01/83 17:07

AS OF JULY 1, 1983 AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
Office of Educational Research and Improvement							
Educational research and statistics							
BA	R83- 14		6,225	2 1 83		6,225	4 13 83
DEPARTMENT OF EDUCATION TOTAL BA			1,230,381			1,230,381	
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT							
Housing Programs							
Payments for oper. of low income housing proj.							
BA	R83- 15		69,000	2 1 83		69,000	4 13 83
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT TOTAL BA			69,000			69,000	
DEPARTMENT OF THE INTERIOR							
National Park Service							
Construction							
B4	R83- 16		63,600	2 1 83		63,600	4 13 83
DEPARTMENT OF THE INTERIOR TOTAL BA			63,600			63,600	
DEPARTMENT OF TRANSPORTATION							
Federal Highway Administration							
Federal-aid highways (trust fund)							

ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983

AS OF JULY 1, 1983

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
BA	R83- 17		23,200	2 1 83		23,200	4 13 83
Coast Guard							
Nat'l recreat. boat. safety & facil. improv. BA	R83- 18		5,000	2 1 83		5,000	4 13 83
DEPARTMENT OF TRANSPORTATION TOTAL BA			28,200			28,200	
OTHER INDEPENDENT AGENCIES							
Corporation for Public Broadcasting							
Public broadcasting fund BA	R83- 19		45,000a	2 1 83			
OTHER INDEPENDENT AGENCIES TOTAL BA			45,000				
OFF-BUDGET FEDERAL ENTITIES							
Department of Agriculture							
Rural telephone bank BA	R83- 20		23,400	2 1 83		23,400	4 13 83
OFF-BUDGET FEDERAL ENTITIES TOTAL BA			23,400			23,400	
TOTAL BA			1,554,015			1,509,015	

a. This is a rescission of FY 1985 funds.

END OF REPORT

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
FUNDS APPROPRIATED TO THE PRESIDENT								
Appalachian Regional Development Programs								
Appalachian regional development programs	BA D83- 40	10,000		2 1 83				10,000
International Security Assistance								
Foreign military sales credit	BA D83- 21	165,000		12 7 82				
	BA D83- 21A		1,010,000	2 1 83	-525,000			650,000
Economic support fund	BA D83- 22	554,720		12 7 82				
	BA D83- 22A		1,347,130	2 1 83	-2,303,629		551,150	149,371
Military assistance	BA D83- 29	11,650		12 7 82				
	BA D83- 29A		221,350	2 1 83	-207,650		14,650	40,000
International Development Assistance								
Functional development assistance program	BA D83- 1	8,129		10 1 82	-8,129			
FUNDS APPROPRIATED TO THE PRESIDENT TOTAL BA		749,499	2,578,480		-3,044,408		565,800	849,371
DEPARTMENT OF AGRICULTURE								
Agricultural Stabilization & Conservation Service								
Dairy and beekeeper indemnity programs	BA D83- 36	7,000		1 5 83		-7,000		
Soil Conservation Sevice								
Watershed and flood prevention operations	BA D83- 41	10,329		2 1 83				10,329
Animal and Plant Health Inspection Service								
Salaries and expenses								

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
	BA	D83- 34	2,134		12 16 82				
	BA	D83- 34A		4,066	2 1 83				6,200
Forest Service									
National forest system	BA	D83- 42	108,035		2 1 83	-21,022			87,013
Timber salvage sales	BA	D83- 2	10,002		10 1 82				
	BA	D83- 2A		3,105	2 1 83	-6,897			6,210
Expenses, brush disposal	BA	D83- 3	44,575		10 1 82	-10,042		8,126	42,659
DEPARTMENT OF AGRICULTURE TOTAL	BA		182,075	7,171		-37,961	-7,000	8,126	152,411
DEPARTMENT OF COMMERCE									
Economic Development Administration									
Economic development assistance programs	BA	D83- 43	181,900		2 1 83		-181,900		
Economic development revolving fund	BA	D83- 37	25,350		1 5 83	-25,350			
International Trade Administration									
Operations and administration	BA	D83- 44	20,100		2 1 83		-20,100		
Participation in U.S. expositions	BA	D83- 4	3,356		10 1 82	-571			2,785
National Oceanic and Atmospheric Administration									
Operations, research, and facilities	BA	D83- 71	2,965		4 21 83				2,965
Construction	BA	D83- 45	3,000		2 1 83				3,000

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
Promote and develop fishery products and research									
	BA	D83- 5	30,619		10 1 82	-30,619			
National Bureau of Standards									
Scientific & technical research & services									
	BA	D83- 38	6,500		1 5 83				6,500
DEPARTMENT OF COMMERCE TOTAL BA			273,790			-56,540	-202,000		15,250
DEPARTMENT OF DEFENSE-MILITARY									
Procurement									
Shipbuilding and conversion, Navy									
	BA	D83- 46	2,400,000		2 1 83	-2,400,000			
Military Construction									
Military construction, all services									
	BA	D83- 6	64,063		10 1 82				
	BA	D83- 6A		1,166,415	12 7 82	-926,863		46,347	349,962
Family Housing, Defense									
Family housing, Defense									
	BA	D83- 23	161,640		12 7 82	-108,640			53,000
DEPARTMENT OF DEFENSE-MILITARY TOTAL BA			2,625,703	1,166,415		-3,435,503		46,347	402,962
DEPARTMENT OF DEFENSE-CIVIL									
Corps of Engineers									
Construction, general									
	BA	D83- 47	180,000		2 1 83				180,000
Wildlife Conservation, Military Reservations									

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Wildlife conservation	BA	D83- 7	1,061		10 1 82	-229		-50a	782
DEPARTMENT OF DEFENSE-CIVIL TOTAL BA			181,061			-229		-50	180,782
DEPARTMENT OF ENERGY									
Atomic Energy Defense Activities									
Atomic energy defense activities	BA	D83- 70	50,000		3 9 83				50,000
Energy Programs									
Energy supply R&D-operating expenses	BA	D83- 72	15,226		4 21 83	-11,000a			4,226
Energy supply R&D-plant and capital equip	BA	D83- 48	91,107		2 1 83				
	BA	D83- 48A		b	5 19 83	-28,595		18,540	81,052
Fossil energy research and development	BA	D83- 8	20,136		10 1 82				
	BA	D83- 8A		b	2 1 83	-15,136			5,000
	BA	D83- 73	8,750		4 21 83		-8,750		
Fossil energy construction	BA	D83- 49	20,000		2 1 83				
	BA	D83- 49A		6,000	4 21 83				26,000
Energy conservation	BA	D83- 24	22,803		12 7 82	-22,803			
	BA	D83- 74	4,500		4 21 83		-4,500		
Strategic Petroleum Reserve	BA	D83- 50	57,400		2 1 83		-57,400		
Departmental Administration									
Depart. admin., operating expenses	BA	D83- 51	21,767		2 1 83	-11,173			10,594

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
Depart. admin., plant & capital equipment	BA	D83- 52	12,693		2 1 83				12,693
DEPARTMENT OF ENERGY TOTAL BA			324,382	6,000		-88,707	-70,650	18,540	189,565
DEPARTMENT OF HEALTH AND HUMAN SERVICES									
Alcohol, Drug Abuse & Mental Health Administration									
Construction & renovation, St. Elizabeths Hospital	BA	D83- 9	9,714		10 1 82				9,714
Office of Assistant Secretary for Health									
Special foreign currency program	BA	D83- 10	6,420		10 1 82				6,420
Social Security Administration									
Limitation on administrative expenses	BA	D83- 53	9,633		2 1 83				9,633
DEPARTMENT OF HEALTH AND HUMAN SERVICES TOTAL BA			25,767						25,767
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT									
Housing Programs									
Subsidized housing programs	BA	D83- 54	3,081,183		2 1 83		-3,081,153		
Payments for operation of low income housing	BA	D83- 30	150,000		12 7 82	-150,000			
Community Planning and Development									
Community development grants	BA	D83- 31	221,000		12 7 82	-221,000			

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Urban development action grants								
	BA D83- 32	234,000		12 7 82				
	BA D83- 32A		10,000	1 5 83		-244,000		
Urban homesteading								
	BA D83- 33	8,000		12 7 82	-8,000			
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT TOTAL BA		3,694,153	10,000		-379,000	-3,325,153		
DEPARTMENT OF THE INTERIOR								
Office of Water Research & Technology								
Salaries and expenses	BA D83- 25	2,545		12 7 82	-2,545			
National Park Service								
Land acquisition and state assistance								
	BA D83- 11	30,000		10 1 82				
	BA D83- 11A		3,000	2 1 83				33,000
Minerals Management Service								
Payments from proceeds, sale of water	BA D83- 39	48		1 5 83				48
Office of Territorial Affairs								
Administration of territories	BA D83- 55	3,188		2 1 83		-3,188		
DEPARTMENT OF THE INTERIOR TOTAL BA		35,781	3,000		-2,545	-3,188		33,048
DEPARTMENT OF JUSTICE								
Interagency Law Enforcement								
Organized crime drug enforcement	BA D83- 56	13,656		2 1 83				13,656
Federal Prison System								

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS

AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
Buildings and facilities									
	BA	D83- 35	16,330		12 16 82				
	BA	D83- 35A		51,507	5 19 83				67,837
DEPARTMENT OF JUSTICE TOTAL BA			29,986	51,507					81,493
DEPARTMENT OF STATE									
International Organizations and Conferences									
Contributions to international organizations									
	BA	D83- 57	8,111		2 1 83				8,111
Other									
Emergency refugee and migration assistance fund									
	BA	D83- 12	37,692		10 1 82			-1,844c	35,848
U.S. bilateral science and technology agreements									
	BA	D83- 58	2,000		2 1 83				2,000
DEPARTMENT OF STATE TOTAL BA			47,803					-1,844	45,959
DEPARTMENT OF TRANSPORTATION									
Urban Mass Transportation Administration									
Urban mass capital fund									
	BA	D83- 59	229,000		2 1 83		-229,000		
Federal Aviation Administration									
Construction, Metropolitan Washington Airports									
	BA	D83- 59	500		2 1 83				500
Civil supersonic aircraft development termination									
	BA	D83- 13	46		10 1 82				46
Facilities & equip. (Airport & airway trust fund)									

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17 05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
	BA	D83- 14	158,485		10 1 82				725,236
	BA	D83- 14A		566,751	2 1 83				
Coast Guard									
Natl recreat. boat. safety & facil. improv.	BA	D83- 61	40,000		2 1 83				40,000
DEPARTMENT OF TRANSPORTATION TOTAL BA			428,031	566,751			-229,000		765,782
DEPARTMENT OF THE TREASURY									
Office of Revenue Sharing									
State and local government fiscal assistance fund	BA	D83- 15	106,474		10 1 82	-51,487		289	55,581
	BA	D83- 15A		305	12 7 82				
	O	D83- 16	7,909		10 1 82	-21,248		14,378	9,074
	O	D83- 16A		6,537	12 7 82				
	O	D83- 16B		1,498	3 9 83				
Federal Law Enforcement Training Center									
Construction	BA	D83- 17	3,078		10 1 82				3,078
DEPARTMENT OF THE TREASURY TOTAL BA			109,552	305		-51,487		289	58,659
TOTAL O			7,909	8,035		-21,248		14,378	9,074
NATIONAL AERONAUTICS & SPACE ADMINISTRATION									
Research and development	BA	D83- 26	34,500		12 7 82				34,500

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
VETERANS ADMINISTRATION								
Construction, major projects								
	BA D83- 27	4,000		12 7 82				4,000
OTHER INDEPENDENT AGENCIES								
District of Columbia								
Loans to DC for capital investment								
	BA D83- 18	38,832		10 1 82	-38,832			
Interstate Commission on the Potomac River Basin								
Contrib. to Interst. Comm. on Potomac Riv. Basin								
	BA D83- 28	12		12 7 82	-12			
Pennsylvania Avenue Development Corporation								
Land acquisition and development fund								
	BA D83- 19	17,949		10 1 82				
	BA D83- 19A		4,408	12 16 82				22,358
Railroad Retirement Board								
Milwaukee railroad restructuring, administration								
	BA D83- 20	240		10 1 82				
	BA D83- 20A		250	2 1 83				490
Limitation on administration								
	BA D83- 75		2,750	5 19 83				2,750
Small Business Administration								
Business loan and investment fund								
	BA D83- 62	143,000		2 1 83		-143,000		
Surety bond guarantees revolving fund								
	BA D83- 63	3,000		2 1 83		-3,000		
Pollu. cont. equip. contract guar. revolv.								
	BA D83- 64	1,000		2 1 83		-1,000		

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Motor Carrier Ratemaking Study Commission									
Salaries and Expenses	BA	D83- 65	282		2 1 83				282
Tennessee Valley Authority									
Tennessee Valley Authority fund	BA	D83- 66	47,271		2 1 83				47,271
United States Information Agency									
Salaries and expenses (spec. for. curr. prog.)	BA	D83- 67	1,344		2 1 83				1,344
Acquis. and construction of radio facilities	BA	D83- 68	12,437		2 1 83				12,437
United States Railway Association									
Payments for purchase of Conrail securities	BA	D83- 69	84,000		2 1 83	-83,600			400
OTHER INDEPENDENT AGENCIES TOTAL BA			349,367	7,409		-122,444	-147,000		87,332
TOTAL BA			9,086,450	4,387,038		-7,218,824	-3,983,991	637,208	2,926,881
TOTAL O			7,908	8,036		-21,248		14,378	9,074

a. $5 million of this amount was released prior to transmittal of the message reporting the withholding of $15.2 million.

b. This revision is a technical adjustment that did not increase the amount deferred.

c. This adjustment is being made to reflect actual unobligated balances available on October 1, 1982. All unobligated balances are being withheld from obligation.

END OF REPORT

98th Congress, 1st Session - - - - - - - House Document No. 98-85

SUPPLEMENTAL APPROPRIATIONS

COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

REQUESTS FOR SUPPLEMENTAL APPROPRIATIONS FOR FISCAL YEAR 1983 AND AMENDMENTS TO THE REQUEST FOR APPROPRIATION FOR FISCAL YEAR 1984

JULY 19, 1983.—Referred to the Committee on Appropriations and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE
11-012 O WASHINGTON : 1983

THE WHITE HOUSE,
Washington, July 19, 1983.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I ask the Congress to consider requests for supplemental appropriations in the amount of $484,000 for fiscal year 1983 and $57,356,000 for fiscal year 1984 and amendments to the request for appropriations for fiscal year 1984 in the amount of $2,200,000.

The details of these proposals are set forth in the enclosed letter from the Director of the Office of Management and Budget. I concur with his comments and observations.

Respectfully,

RONALD REAGAN.

Enclosures.

Estimate No. 13
98th Congress, 1st Session

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

July 19, 1983

The President
The White House

Sir:

I have the honor to submit for your consideration requests for supplemental appropriations in the amount of $484,000 for fiscal year 1983 and $57,356,000 for fiscal year 1984 and amendments to the request for appropriations for fiscal year 1984 in the amount of $2,200,000.

I have carefully reviewed the proposals contained in this document and am satisfied that these requests are necessary at this time. I recommend, therefore, that these proposals be transmitted to the Congress.

Respectfully,

David A. Stockman

David A. Stockman
Director

Enclosures

Department of the Interior

Office of the Solicitor

Salaries and Expenses

For an additional amount for "Salaries and expenses", $484,000.

1984 Budget Appendix Page	Heading	1984 Budget Request Pending	1984 Proposed Amendment	1984 Revised Request
	Office of Surface Mining			
I-M43	Regulation and technology	$63,497,000	$1,100,000	$64,597,000
	Office of the Solicitor			
I-M60	Salaries and expenses	18,647,000	1,100,000	19,747,000

This proposal would provide funds to aggressively pursue collection of assessed penalties and alternative enforcement actions against violators of the Surface Mining Control and Reclamation Act. The proposal would increase outlays by $500 thousand in fiscal year 1983 and $2.2 million in 1984.

VETERANS ADMINISTRATION
Medical and Prosthetic Research

For an additional amount for "Medical and prosthetic research", $57,356,000, to remain available until September 30, 1985.

This 1984 supplemental appropriation request would provide funding for the Agent Orange epidemiological study to be conducted by the Centers for Disease Control. This proposal would increase 1984 outlays by $14.1 million.

○

98th Congress, 1st Session . . . . . . House Document No. 98-86

CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS, JULY 1983

COMMUNICATION

FROM

THE DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT

TRANSMITTING

A CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS OF BUDGET AUTHORITY AS OF JULY 1983, PURSUANT TO SECTION 1014(e) OF PUBLIC LAW 93-344

JULY 20, 1983.—Referred to the Committee on Appropriations and ordered to be printed.

U.S. GOVERNMENT PRINTING OFFICE
11-011 O WASHINGTON : 1983

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. [illegible]

July 8, 1983

Honorable Thomas P. O'Neill
Speaker of the House of
  Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

In accordance with Executive Order 11845, I am transmitting the cumulative report required by Section 1014(e) of the Congressional Budget and Impoundment Control Act of 1974. In accordance with the Act, the report is also being transmitted to the Senate and will be published in the Federal Register.

Sincerely,

David A. Stockman

David A. Stockman
Director

Enclosures

IDENTICAL LETTER SENT TO THE PRESIDENT OF THE SENATE

CUMULATIVE REPORT ON RESCISSIONS AND DEFERRALS

July 1, 1983

This report is submitted in fulfillment of the requirements of Section 1014(e) of the Impoundment Control Act of 1974 (Public Law 93-344). Section 1014(e) provides for a monthly report listing all budget authority for this fiscal year with respect to which, as of the first day of the month, a special message has been transmitted to the Congress.

This report gives the status as of July 1, 1983 of 20 rescission proposals and 75 deferrals contained in the first eight special messages of FY 1983. These messages were transmitted to the Congress on October 1, and December 7, and 16, 1982, and January 5, February 1, March 9, April 21,and May 19, 1983.

Rescissions (Table A and Attachment A)

Twenty rescission proposals totaling $1,554 million are currently pending before the Congress. Table A summarizes the status of rescissions proposed by the President as of July 1, 1983, while Attachment A shows the history and status of each rescission proposed during FY 1983.

Deferrals (Table B and Attachment B)

As of July 1, 1983, $2,926.9 million in 1983 budget authority was being deferred from obligation and another $9.1 million in 1983 obligations was being deferred from expenditure. Attachment B shows the history and status of each deferral reported during FY 1983.

Information from special messages

The special messages containing information on the rescissions and the deferrals covered by the cumulative report are printed in the Federal Registers listed below:

Vol. 47, FR p. 44524, Thursday October 7, 1982
Vol. 47, FR p. 55602, Friday, December 10, 1982
Vol. 47, FR p. 57230, Wednesday, December 22, 1982
Vol. 48, FR p. 1266, Tuesday, January 11, 1983
Vol. 48, FR p. 5474, Friday, February 4, 1983
Vol. 48, FR p. 11244, Wednesday, March 16, 1983
Vol. 48, FR p. 18978, Tuesday, April 26, 1983
Vol. 48, FR p. 23374, Tuesday, May 24, 1983

TABLE A

STATUS OF 1983 RESCISSIONS

	Amount (In millions of dollars)
Rescissions proposed by the President	$1,554.0
Accepted by the Congress	-0-
Rejected by the Congress	-0-
Pending before the Congress	$1,554.0 [a]

[a] These rescission proposals are still considered to be pending before the Congress, even though the 45-day withholding period has expired.

* * *

TABLE B

STATUS OF 1983 DEFERRALS

	Amount (In millions of dollars)*
Deferrals proposed by the President	$13,508.4
Routine Executive releases (-$7240.1 million) and adjustments ($651.6 million) through July 1, 1983	-6,588.5
Overturned by the Congress	-3,984.0
Currently before the Congress	$ 2,936.0 [a]

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* Detail does not add to total due to rounding.

[a] This amount includes $9.1 million in outlays for a Department of the Treasury deferral (D83-16B).

Attachments

ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983

AS OF JULY 1, 1983 AS OF 07/01/83 17:07

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
FUNDS APPROPRIATED TO THE PRESIDENT							
Appalachian Regional Development Programs							
Appalachian Regional Development programs BA	R83- 2		15,133	2 1 83		15,133	4 13 83
FUNDS APPROPRIATED TO THE PRESIDENT TOTAL BA			15,133			15,133	
DEPARTMENT OF AGRICULTURE							
Agricultural Research Service							
Buildings and facilities BA	R83- 3		1,827	2 1 83		1,827	4 13 83
Soil Conservation Service							
Watershed and flood prevention operations BA	R83- 4		68,885	2 1 83		68,885	4 13 83
Resource conservation and development BA	R83- 5		5,800	2 1 83		5,800	4 13 83
Agricultural Cooperative Service							
Salaries and expenses BA	R83- 6		779	2 1 83		779	4 13 83
DEPARTMENT OF AGRICULTURE TOTAL BA			77,301			77,301	
DEPARTMENT OF COMMERCE							

AS OF JULY 1, 1983 AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
National Oceanic and Atmospheric Administration							
Construction							
BA	R83- 1		2,000	12 16 82		2,000	3 25 83
DEPARTMENT OF COMMERCE							
TOTAL BA			2,000			2,000	
DEPARTMENT OF EDUCATION							
Office of Elementary and Secondary Education							
Compensatory education for the disadvantaged							
BA	R83- 7		133,925	2 1 83		133,925	4 13 83
School assistance in federally affected areas							
BA	R83- 8		5,000	2 1 83		5,000	4 13 83
Special programs and populations							
BA	R83- 9		56,639	2 1 83		56,639	4 13 83
Indian education							
BA	R83- 10		16,128	2 1 83		16,128	4 13 83
Off. of Bilingual Educ. & Minority Lang. Affairs							
Bilingual edution							
BA	R83- 11		43,523	2 1 83		43,523	4 13 83
Office of Postsecondary Education							
Guaranteed student loans							
BA	R83- 12		900,000	2 1 83		900,000	4 13 83
Higher and continuing education							
BA	R83- 13		68,941	2 1 83		68,941	4 13 83

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PAGE   3                          ATTACHMENT A - STATUS OF RESCISSIONS - FISCAL YEAR 1983                    AS OF 07/01/83 17:07
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
AS OF JULY 1, 1983
     AMOUNTS IN                                      AMOUNT         AMOUNT
 THOUSANDS OF DOLLARS                              PREVIOUSLY     CURRENTLY     DATE OF
AGENCY/BUREAU/ACCOUNT          RESCISSION         CONSIDERED     BEFORE THE    MESSAGE       AMOUNT          AMOUNT     DATE MADE
                                 NUMBER          BY CONGRESS     CONGRESS      MO DA YR     RESCINDED         MADE      AVAILABLE
                                                                                                            AVAILABLE   MO DA YR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  Office of Educational Research and Improvement

    Educational research and statistics
                        BA
                                R83- 14                              6,225    2  1 83                         6,225    4 13 83
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF EDUCATION
                  TOTAL BA                                       1,230,381                                1,230,381
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

  Housing Programs

    Payments for oper. of low income housing proj.
                        BA
                                R83- 15                             69,000    2  1 83                        69,000    4 13 83


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
                  TOTAL BA                                          69,000                                   69,000
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF THE INTERIOR

  National Park Service

    Construction
                        BA
                                R83- 16                             63,600    2  1 83                        63,600    4 13 83


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF THE INTERIOR
                  TOTAL BA                                          63,600                                   63,600
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DEPARTMENT OF TRANSPORTATION

  Federal Highway Administration

    Federal-aid highways (trust fund)
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AS OF JULY 1, 1983 AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	RESCISSION NUMBER	AMOUNT PREVIOUSLY CONSIDERED BY CONGRESS	AMOUNT CURRENTLY BEFORE THE CONGRESS	DATE OF MESSAGE MO DA YR	AMOUNT RESCINDED	AMOUNT MADE AVAILABLE	DATE MADE AVAILABLE MO DA YR
BA	R83- 17		23,200	2 1 83		23,200	4 13 83
Coast Guard							
Nat'l recreat. boat. safety & facil. improv.							
BA	R83- 18		5,000	2 1 83		5,000	4 13 83
DEPARTMENT OF TRANSPORTATION TOTAL BA			28,200			28,200	
OTHER INDEPENDENT AGENCIES							
Corporation for Public Broadcasting							
Public broadcasting fund							
BA	R83- 19		45,000a	2 1 83			
OTHER INDEPENDENT AGENCIES TOTAL BA			45,000				
OFF-BUDGET FEDERAL ENTITIES							
Department of Agriculture							
Rural telephone bank							
BA	R83- 20		23,400	2 1 83		23,400	4 13 83
OFF-BUDGET FEDERAL ENTITIES TOTAL BA			23,400			23,400	
TOTAL BA			1,854,018			1,809,018	

a. This is a rescission of FY 1985 funds.

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:06

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
FUNDS APPROPRIATED TO THE PRESIDENT									
Appalachian Regional Development Programs									
Appalachian regional development programs	BA	D83- 40	10,000		2 1 83				10,000
International Security Assistance									
Foreign military sales credit	BA	D83- 21	165,000		12 7 82				
	BA	D83- 21A		1,010,000	2 1 83	-525,000			650,000
Economic support fund	BA	D83- 22	554,720		12 7 82				
	BA	D83- 22A		1,347,130	2 1 83	-2,303,629		551,150	149,371
Military assistance	BA	D83- 28	11,650		12 7 82				
	BA	D83- 28A		221,350	2 1 83	-207,650		14,650	40,000
International Development Assistance									
Functional development assistance program	BA	D83- 1	8,129		10 1 82	-8,129			
FUNDS APPROPRIATED TO THE PRESIDENT TOTAL BA			749,499	2,578,480		-3,044,408		565,800	849,371
DEPARTMENT OF AGRICULTURE									
Agricultural Stabilization & Conservation Service									
Dairy and beekeeper indemnity programs	BA	D83- 36	7,000		1 5 83		-7,000		
Soil Conservation Sevice									
Watershed and flood prevention operations	BA	D83- 41	10,329		2 1 83				10,329
Animal and Plant Health Inspection Service									
Salaries and expenses									

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:06

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
	BA	D83- 34	2,134		12 16 82				
	BA	D83- 34A		4,066	2 1 83				6,200
Forest Service									
National forest system	BA	D83- 42	108,035		2 1 83	-21,022			87,013
Timber salvage sales	BA	D83- 2	10,002		10 1 82				
	BA	D83- 2A		3,105	2 1 83	-6,897			6,210
Expenses, brush disposal	BA	D83- 3	44,575		10 1 82	-10,042		8,126	42,659
DEPARTMENT OF AGRICULTURE TOTAL	BA		182,075	7,171		-37,861	-7,000	8,126	182,411
DEPARTMENT OF COMMERCE									
Economic Development Administration									
Economic development assistance programs	BA	D83- 43	181,900		2 1 83		-181,900		
Economic development revolving fund	BA	D83- 37	25,350		1 5 83	-25,350			
International Trade Administration									
Operations and administration	BA	D83- 44	20,100		2 1 83		-20,100		
Participation in U.S. expositions	BA	D83- 4	3,356		10 1 82	-571			2,785
National Oceanic and Atmospheric Administration									
Operations, research, and facilities	BA	D83- 71	2,965		4 21 83				2,965
Construction	BA	D83- 45	3,000		2 1 83				3,000

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Promote and develop fishery products and research	BA	D83- 9	30,619		10 1 82	-30,619			
National Bureau of Standards									
Scientific & technical research & services	BA	D83- 38	6,500		1 5 83				6,500
DEPARTMENT OF COMMERCE TOTAL BA			273,790			-56,540	-202,000		15,250
DEPARTMENT OF DEFENSE-MILITARY									
Procurement									
Shipbuilding and conversion, Navy	BA	D83- 46	2,400,000		2 1 83	-2,400,000			
Military Construction									
Military construction, all services	BA	D83- 6	84,063		10 1 82				
	BA	D83- 6A		1,166,415	12 7 82	-946,863		46,347	349,962
Family Housing, Defense									
Family housing, Defense	BA	D83- 23	161,640		12 7 82	-108,640			53,000
DEPARTMENT OF DEFENSE-MILITARY TOTAL BA			2,645,703	1,166,415		-3,455,503		46,347	402,962
DEPARTMENT OF DEFENSE-CIVIL									
Corps of Engineers									
Construction, general	BA	D83- 47	180,000		2 1 83				180,000
Wildlife Conservation, Military Reservations									

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:08

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Wildlife conservation									
	BA	D83- 7	1,061		10 1 82	-229		-50a	782
DEPARTMENT OF DEFENSE-CIVIL TOTAL BA			181,061			-229		-50	180,782
DEPARTMENT OF ENERGY									
Atomic Energy Defense Activities									
Atomic energy defense activities									
	BA	D83- 70	50,000		3 9 83				50,000
Energy Programs									
Energy supply R&D-operating expenses									
	BA	D83- 72	15,226		4 21 83	-11,000a			4,226
Energy supply R&D-plant and capital equip.									
	BA	D83- 48	91,107		2 1 83				
	BA	D83- 48A		b	5 19 83	-28,595		18,540	81,052
Fossil energy research and development									
	BA	D83- 8	20,136		10 1 82				
	BA	D83- 8A		b	2 1 83	-15,136			5,000
	BA	D83- 73	8,750		4 21 83		-8,750		
Fossil energy construction									
	BA	D83- 49	20,000		2 1 83				
	BA	D83- 49A		6,000	4 21 83				26,000
Energy conservation									
	BA	D83- 24	22,803		12 7 82	-22,803			
	BA	D83- 74	4,500		4 21 83		-4,500		
Strategic Petroleum Reserve									
	BA	D83- 50	57,400		2 1 83		-57,400		
Departmental Administration									
Depart. admin., operating expenses									
	BA	D83- 51	21,767		2 1 83	-11,173			10,594

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:06

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Depart. admin., plant & capital equipment	BA	D83- 52	12,693		2 1 83				12,693
DEPARTMENT OF ENERGY TOTAL BA			324,382	6,000		-88,707	-70,650	18,540	189,565
DEPARTMENT OF HEALTH AND HUMAN SERVICES									
Alcohol, Drug Abuse & Mental Health Administration									
Construction & renovation, St. Elizabeths Hospital	BA	D83- 9	9,714		10 1 82				9,714
Office of Assistant Secretary for Health									
Special foreign currency program	BA	D83- 10	6,420		10 1 82				6,420
Social Security Administration									
Limitation on administrative expenses	BA	D83- 53	9,633		2 1 83				9,633
DEPARTMENT OF HEALTH AND HUMAN SERVICES TOTAL BA			25,767						25,767
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT									
Housing Programs									
Subsidized housing programs	BA	D83- 54	3,081,153		2 1 83		-3,081,153		
Payments for operation of low income housing	BA	D83- 30	150,000		12 7 82	-150,000			
Community Planning and Development									
Community development grants	BA	D83- 31	221,000		12 7 82	-221,000			

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Urban development action grants									
	BA	D83- 32	234,000		12 7 82				
	BA	D83- 32A		10,000	1 5 83		-244,000		
Urban homesteading									
	BA	D83- 33	8,000		12 7 82	-8,000			
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT TOTAL BA			3,694,153	10,000		-376,000	-3,328,153		
DEPARTMENT OF THE INTERIOR									
Office of Water Research & Technology									
Salaries and expenses									
	BA	D83- 25	2,545		12 7 82	-2,545			
National Park Service									
Land acquisition and state assistance									
	BA	D83- 11	30,000		10 1 82				
	BA	D83- 11A		3,000	2 1 83				33,000
Minerals Management Service									
Payments from proceeds, sale of water									
	BA	D83- 39	48		1 5 83				48
Office of Territorial Affairs									
Administration of territories									
	BA	D83- 55	3,188		2 1 83		-3,188		
DEPARTMENT OF THE INTERIOR TOTAL BA			35,781	3,000		-2,545	-3,188		33,048
DEPARTMENT OF JUSTICE									
Interagency Law Enforcement									
Organized crime drug enforcement									
	BA	D83- 56	13,656		2 1 83				13,656
Federal Prison System									

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Buildings and facilities									
	BA	D83- 35	16,330		12 16 82				
	BA	D83- 35A		51,507	5 18 83				
DEPARTMENT OF JUSTICE									67,837
TOTAL BA			29,886	51,507					
DEPARTMENT OF STATE									81,493
International Organizations and Conferences									
Contributions to international organizations									
	BA	D83- 57	8,111						
Other					2 1 83				
									8,111
Emergency refugee and migration assistance fun.									
	BA	D83- 12	37,692						
U.S. bilateral science and technology agreements					10 1 82			-1,844c	35,848
	BA	D83- 58	2,000						
					2 1 83				
									2,000
DEPARTMENT OF STATE									
TOTAL BA			47,803						
DEPARTMENT OF TRANSPORTATION								-1,844	45,959
Urban Mass Transportation Administration									
Urban mass capital fund									
	BA	D83- 59	228,000						
Federal Aviation Administration					2 1 83		-228,000		
Construction, Metropolitan Washington Airports									
	BA	D83- 59	500						
Civil supersonic aircraft development termination					2 1 83				500
	BA	D83- 13	46						
Facilities & equip. (Airport & airway trust fund)					10 1 82				46

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983

AS OF 07/01/83 17:05

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
	BA	D83- 14	158,485		10 1 82				
	BA	D83- 14A		566,751	2 1 83				725,236
Coast Guard									
Natl recreat. boat. safety & facil. improv.									
	BA	D83- 61	40,000		2 1 83				40,000
DEPARTMENT OF TRANSPORTATION TOTAL BA			428,031	866,751			-329,000		765,782
DEPARTMENT OF THE TREASURY									
Office of Revenue Sharing									
State and local government fiscal assistance fund									
	BA	D83- 15	106,474		10 1 82				
	BA	D83- 15A		305	12 7 82	-51,487		289	55,581
	O	D83- 16	7,909		10 1 82				
	O	D83- 16A		6,537	12 7 82				
	O	D83- 16B		1,498	3 9 83	-21,248		14,378	9,074
Federal Law Enforcement Training Center									
Construction									
	BA	D83- 17	3,078		10 1 82				3,078
DEPARTMENT OF THE TREASURY TOTAL BA			109,552	305		-51,487		289	58,659
TOTAL O			7,909	8,035		-21,248		14,378	9,074
NATIONAL AERONAUTICS & SPACE ADMINISTRATION									
Research and development									
	BA	D83- 26	34,500		12 7 82				34,500

ATTACHMENT B - STATUS OF DEFERRALS - FISCAL YEAR 1983.

AMOUNTS IN THOUSANDS OF DOLLARS

AS OF 07/01/83 17:08

AGENCY/BUREAU/ACCOUNT		DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULATIVE OMB /AGENCY RELEASES	CONGRESSIONALLY REQUIRED RELEASES	CUMULATIVE ADJUSTMENTS	AMOUNT DEFERRED AS OF 7-1-83
VETERANS ADMINISTRATION									
Construction, major projects									
	BA	D83- 27	4,000		12 7 82				4,000
OTHER INDEPENDENT AGENCIES									
District of Columbia									
Loans to DC for capital investment									
	BA	D83- 18	38,832		10 1 82	-38,832			
Interstate Commission on the Potomac River Basin									
Contrib. to Interst. Comm. on Potomac Riv. Basin									
	BA	D83- 28	12		12 7 82	-12			
Pennsylvania Avenue Development Corporation									
Land acquisition and development fund									
	BA	D83- 19	17,949		10 1 82				
	BA	D83- 19A		4,409	12 16 82				22,358
Railroad Retirement Board									
Milwaukee railroad restructuring, administration									
	BA	D83- 20	240		10 1 82				
	BA	D83- 20A		250	2 1 83				490
Limitation on administration									
	BA	D83- 75		2,750	5 10 83				2,750
Small Business Administration									
Business loan and investment fund									
	BA	D83- 62	143,000		2 1 83		-143,000		
Surety bond guarantees revolving fund									
	BA	D83- 63	3,000		2 1 83		-3,000		
Pollu. cont. equip. contract guar. revolv.									
	BA	D83- 64	1,000		2 1 83		-1,000		

AMOUNTS IN THOUSANDS OF DOLLARS AGENCY/BUREAU/ACCOUNT	DEFERRAL NUMBER	AMOUNT TRANSMITTED ORIGINAL REQUEST	AMOUNT TRANSMITTED SUBSEQUENT CHANGE	DATE OF MESSAGE MO DA YR	CUMULA-TIVE OMB /AGENCY RELEASES	CONGRES-SIONALLY REQUIRED RELEASES	CUMULA-TIVE ADJUST-MENTS	AMOUNT DEFERRED AS OF 7-1-83
Motor Carrier Ratemaking Study Commission								
Salaries and Expenses								
BA	D83- 65	282		2 1 83				282
Tennessee Valley Authority								
Tennessee Valley Authority fund								
BA	D83- 66	47,271		2 1 83				47,271
United States Information Agency								
Salaries and expenses (spec. for. curr. prog.)								
BA	D83- 67	1,344		2 1 83				1,344
Acquis. and construction of radio facilities								
BA	D83- 68	12,437		2 1 83				12,437
United States Railway Association								
Payments for purchase of Conrail securities								
BA	D83- 69	84,000		2 1 83	-83,600			400
OTHER INDEPENDENT AGENCIES TOTAL BA		349,367	7,409		-122,444	-147,000		87,332
TOTAL BA		9,085,450	4,397,038		-7,218,824	-3,983,981	637,208	2,926,881
TOTAL O		7,909	8,035		-21,248		14,378	9,074

a. $5 million of this amount was released prior to transmittal of the message reporting the withholding of $15.2 million.

b. This revision is a technical adjustment that did not increase the amount deferred.

c. This adjustment is being made to reflect actual unobligated balances available on October 1, 1982. All unobligated balances are being withheld from obligation.

98th Congress, 1st Session - - - - - - - - House Document No. 98-87

SUPPLEMENTAL SUMMARY FISCAL YEAR 1984 BUDGET

COMMUNICATION

FROM

THE DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT

TRANSMITTING

THE SUPPLEMENTAL SUMMARY OF THE BUDGET FOR FISCAL YEAR 1984, PURSUANT TO 31 U.S.C. 1106(a)(1)

JULY 26, 1983.—Referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
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EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

JUL 25

JUL 2 5 1983

Honorable Thomas P. O'Neill
Speaker of the House of
  Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

Section 201 of the Budget and Accounting Act of 1921, as amended, requires that the President transmit to the Congress, in July of each year, a supplemental summary of the budget that was transmitted to the Congress in January of that year. The supplemental summary of the 1984 budget contains:

-- revised budget summaries and projections for fiscal years 1983-1988;

-- economic assumptions underlying the budget data;

-- a summary of estimated outlays in each of the first four years after fiscal year 1984 that will be required under continuing programs that have a legal commitment for future years or are considered mandatory under existing law; and

-- a summary of estimated outlays in future years from balances carried over from fiscal year 1984.

At the President's direction, I have the honor to transmit herewith the required supplemental summary of the fiscal year 1984 budget.

Sincerely,

David A. Stockman
David A. Stockman
Director

Enclosure

IDENTICAL LETTER SENT TO HONORABLE GEORGE C. BUSH

pages tightly bound

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

FOR IMMEDIATE RELEASE
July 25, 1983

MID-SESSION REVIEW OF THE 1984 BUDGET

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GENERAL NOTES

1. All years referred to are fiscal years, unless otherwise noted.
2. Details in the tables and text of this document may not add to the totals due to rounding.

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INTRODUCTION

Shortly after taking office in January 1981, President Reagan went before the American people to report on the economic crisis facing this country and to announce his program for economic recovery.

This four part program was designed to reduce inflation and promote long-term economic growth by: (1) reducing the rate of growth of Federal spending; (2) limiting tax burdens to the minimum levels necessary to finance essential government services; (3) simplifying and reducing Federal regulations; and (4) supporting a moderate and steady growth in the money supply.

During the past 2-1/2 years, substantial progress has been made in meeting these goals: the rate of inflation has been reduced from 12-1/2% in the winter of 1980-81 to under 4-1/2% now; the growth rate of Federal spending, which was almost out of control at 17.4% a year in 1980, declined to 10.8% in 1982; marginal tax rates for individuals have been reduced by 25% and excessive taxation of business income has been reduced through depreciation reform; and, the number of proposed new regulations has been reduced by one-third.

Although unemployment still remains high at 9.8%, there is growing evidence that the economy is getting stronger and stronger, and that a broad-based non-inflationary economic recovery is well under way.

The Administration therefore has revised its economic forecast to reflect a stronger economic recovery than was assumed in the April budget update. The estimates presented in this review are based on the revised forecast, which assumes real growth of 5.5% in 1983, compared to the 4.7% assumed in April. Real growth for 1984 has been revised upward by 0.5 percentage points to 4.5%.

It must be understood, however, that bipartisan cooperation of the Congress is imperative if the Administration's high non-inflationary growth forecast is to be achieved. Any undisciplined tax or spending increases that exceed those reflected in this review would pose a serious threat to sustained recovery.

BUDGET TOTALS

Table 1 compares the revised budget totals with the Administration's April estimates. The revised estimates reflect the effect of the Social Security Amendments of 1983; the Jobs Bill; and the Legislative, Energy and Water, and HUD/Independent Agencies appropriation bills.

The deficit for 1983 is currently estimated to be $209.8 billion, $0.4 billion less than the April estimate. This decrease is the net effect of a $1.6 billion increase in receipts and a $1.2 billion increase in outlays.

For 1984, the projected deficit is $179.7 billion, $10.6 billion less than the $190.2 billion estimated in April, reflecting increases in receipts and outlays of $14.7 billion and $4.2 billion, respectively.

The estimates of the deficits for 1985 through 1988 are lower than projected in April by $14.4 billion to $20.1 billion.

Table 1.--BUDGET TOTALS
(in billions of dollars)

	Receipts	Outlays	Deficit (-)
1982 actual..........................	617.8	728.4	-110.6
1983 estimate:			
January budget...................	597.5	805.2	-207.7
April estimate...................	598.3	808.5	-210.2
Mid-Session......................	599.9	809.8	-209.8
1984 estimate:			
January budget...................	659.7	848.5	-188.8
April estimate...................	653.7	843.9	-190.2
Mid-Session......................	668.4	848.1	-179.7
1985 estimate:			
January budget...................	724.3	918.5	-194.2
April estimate...................	732.4	917.0	-184.6
Mid-Session......................	748.1	918.3	-170.2
1986 estimate:			
January budget...................	841.9	989.6	-147.7
April estimate...................	843.8	988.4	-144.6
Mid-Session......................	861.9	990.9	-129.0
1987 estimate:			
January budget...................	916.3	1,058.4	-142.1
April estimate...................	921.3	1,057.9	-136.6
Mid-Session......................	939.7	1,058.0	-118.4
1988 estimate:			
January budget...................	1,010.3	1,126.9	-116.7
April estimate...................	1,022.9	1,125.3	-102.4
Mid-Session......................	1,041.4	1,123.6	-82.3

ECONOMIC ASSUMPTIONS

The economic assumptions used for these budget estimates have been revised since April to reflect actual data for the first half of 1983. The new assumptions appear in Table 2. They show a stronger economic recovery than anticipated in April, and slightly higher inflation and interest rate assumptions for 1983.

The Administration now expects real gross national product (GNP) to grow 5.5% from the fourth quarter of 1982 to the fourth quarter of 1983, compared to the 4.7% assumed in April. Unemployment is expected to decline from its current rate of 9.8% to 9.6% by the end of 1983, and to 8.6% a year later. These assumptions do not reflect the GNP revisions released last week, which show the real GNP recovery in the second quarter of 1983 to have been even stronger than in these assumptions.

For 1984, real growth is projected at 4.5%, 0.5 percentage points higher than in April, reflecting a continuation of the stronger economic recovery in 1983. Real growth rates for subsequent years are unchanged. Unemployment rates are slightly lower than in the April projections.

TABLE 2.--ECONOMIC ASSUMPTIONS

(calendar years; dollar amounts in billions)

	Actual	Estimates					
	1982	1983	1984	1985	1986	1987	1988
Major economic indicators:							
Gross national product (percent change, fourth quarter over fourth quarter):							
Current dollars	3.5	10.4	9.7	9.0	8.7	8.7	8.6
Constant (1972) dollars	-0.9	5.5	4.5	4.0	4.0	4.0	4.0
GNP deflator (percent change, fourth quarter over fourth quarter)	4.4	4.6	5.0	4.8	4.5	4.5	4.4
Consumer Price Index (percent change, fourth quarter over fourth quarter) 1/	4.5	3.1	4.4	4.7	4.5	4.5	4.4
Unemployment rate (percent, fourth quarter) 2/	10.5	9.6	8.6	8.0	7.3	6.6	5.9
Annual economic assumptions:							
Gross national product:							
Current dollars:							
Amount	3,059	3,299	3,636	3,973	4,322	4,697	5,101
Percent change, year over year	4.1	7.8	10.2	9.3	8.8	8.7	8.6
Constant (1972) dollars:							
Amount	1,477	1,522	1,602	1,668	1,735	1,805	1,877
Percent change, year over year	-1.7	3.1	5.2	4.2	4.0	4.0	4.0
Incomes:							
Personal income	2,570	2,739	2,968	3,212	3,467	3,756	4,065
Wages and salaries	1,561	1,654	1,793	1,943	2,106	2,295	2,500
Corporate profits	175	201	267	304	342	385	408
Price level:							
GNP deflator:							
Level (1972=100), annual average	207.1	216.7	227.0	238.1	249.1	260.3	271.8
Percent change, year over year	5.9	4.6	4.8	4.9	4.6	4.5	4.4
Consumer Price Index 1/:							
Level (1967=100), annual average	288.6	297.7	310.9	325.2	340.2	355.5	371.3
Percent change, year over year	6.0	3.1	4.4	4.6	4.6	4.5	4.4
Unemployment rates:							
Total, annual average 2/	9.5	9.9	8.9	8.2	7.5	6.9	6.2
Insured, annual average 3/	4.7	4.2	3.8	3.5	3.2	2.8	2.5
Federal pay raise, October (percent) 4/	4.0	--	5.6	5.8	5.8	5.6	5.5
Interest rate, 91-day Treasury bills (percent) 5/	10.7	8.6	8.5	7.8	7.2	6.6	6.1
Interest rate, 10-year Treasury notes (percent)	13.0	10.6	10.1	9.3	8.7	7.6	6.7

1/ CPI for urban wage earners and clerical workers. Two versions of the CPI are published. The index shown here is that currently used, as required by law, to calculate automatic cost-of-living increases for indexed Federal programs.

2/ Percent of total labor force, including armed forces residing in the U.S.

3/ This indicator measures unemployment under state regular unemployment insurance as a percentage of covered employment under that program. It does not include recipients of extended benefits under that program.

4/ General schedule pay raises become effective in October -- the first month of the fiscal year. Thus, the October 1984 pay raise will set new pay scales that will be in effect during fiscal year 1985. On a current services basis the Federal pay raise in October 1983 would be 6.3%.

5/ Average rate on new issues within period, on a bank discount basis.

BUDGET RECEIPTS

The Mid-Session estimate of 1983 receipts is $599.9 billion, $1.6 billion greater than the April estimate. Receipts in 1984 are now estimated at $668.4 billion, $14.7 billion above the April estimate of $653.7 billion. Estimates of receipts for 1985 through 1988 have been revised upward by $15.7 billion to $18.4 billion in each year. These revisions are largely due to the revised economic assumptions.

Table 3.--CHANGE IN BUDGET RECEIPTS
(in billions of dollars)

	1983	1984	1985	1986	1987	1988
January budget.........	597.5	659.7	724.3	841.9	916.3	1,010.3
Changes..............	0.8	-6.0	8.0	1.9	5.0	12.7
April estimate.........	598.3	653.7	732.4	843.8	921.3	1,022.9
Revised economic assumptions.........	4.7	15.5	17.0	19.6	20.5	21.9
Policy changes:						
One month delay in withholding on interest and dividends.........	-0.2	0.1	---	---	---	---
Inaction on tax credit for the long-term unemployed........	*	0.4	*	*	*	*
Subtotal, policy.	-0.2	0.5	*	*	*	*
Technical reestimates	-2.9	-1.2	-1.3	-1.5	-2.2	-3.4
Total changes....	1.6	14.7	15.7	18.1	18.4	18.4
Mid-Session estimate...	599.9	668.4	748.1	861.9	939.7	1,041.4

---

* $50 million or less.

Economic assumptions.--The revised economic assumptions increase receipts by $4.7 billion in 1983 and $15.5 billion in 1984. The upward revisions increase annually thereafter, rising to $21.9 billion by 1988. These changes are the result of higher income and payroll taxes, reflecting higher nominal incomes.

Policy changes.--Under the Tax Equity and Fiscal Responsibility Act of 1982, withholding at the rate of 10% was required on interest and dividen payments made after June 30, 1983. Withholding was to occur when the interest and dividend income was paid or credited. Regulations issued in March 1983 modified this provision by allowing end-of-year withholding on selected interest income. This means that 10% of the interest paid or credited after June 30, 1983 was to be withheld, but the withholding could occur at the end of the calendar year rather than when the interest was paid or credited. It is now apparent that withholding on interest and dividend income will be substantially modified by the Congress. A one month delay in withholding on interest and dividend income is currently in effect, which reduces receipts $0.2 billion in 1983 and increases receipts $0.1 billion in 1984.

Congressional inaction on the proposed tax credit for the long-term unemployed increases 1984 receipts by an additional $0.4 billion.

Technical reestimates.--Technical reestimates, primarily based on collection experience to date, reduce receipts by $2.9 billion in 1983. Technical reestimates also reduce receipts in subsequent years.

BUDGET OUTLAYS

The outlay estimate for 1983 is $809.8 billion, $1.2 billion above the April estimate. Outlays for 1984 are now estimated at $848.1 billion, $4.2 billion above the April estimate of $843.9 billion. Estimated outlays for 1985 and 1986 are also above the April estimate by $1.3 billion and $2.4 billion, respectively. The estimate for 1987 is virtually unchanged, while that for 1988 is $1.7 billion lower. As shown in Table 4, these changes are attributable to the following factors: (1) revised economic assumptions; (2) revised Administration policy; (3) congressional action (or inaction) that differs from Administration proposals; and (4) technical reestimates.

Table 4.--CHANGE IN BUDGET OUTLAYS
(in billions of dollars)

	Estimates					
	1983	1984	1985	1986	1987	1988
January budget...........	805.2	848.5	918.5	989.6	1058.4	1126.9
Changes................	3.3	-4.6	-1.6	-1.1	-0.6	-1.7
April estimate...........	808.5	843.9	917.0	988.4	1057.9	1125.3
Revised economic assumptions:						
Social security......	-0.2	*	0.4	0.5	0.4	0.3
Food stamps..........	---	0.3	0.4	0.5	0.6	0.6
Unemployment compensation........	-0.3	-2.8	-2.4	-1.9	-1.9	-2.1
National defense.....	---	-2.3	---	---	---	---
Net interest.........	0.5	1.8	0.2	*	-0.9	-4.0
Other................	0.2	0.2	0.2	0.2	0.2	0.2
Subtotal, economic.	0.2	-2.8	-1.3	-0.6	-1.6	-5.0
Policy changes:						
National defense.....	-*	-0.7	---	---	---	---
EPA operations and hazardous waste programs............	---	0.1	0.2	0.2	0.1	0.1
Other................	---	*	*	*	*	---
Subtotal, policy...	-*	-0.6	0.2	0.2	0.2	0.1
Congressional action or inaction..............	0.4	0.1	-*	-*	0.1	-*

Table 4.--CHANGE IN BUDGET OUTLAYS (cont.)
(in billions of dollars)

	Estimates 1983	1984	1985	1986	1987	1988
Technical reestimates:						
Export-Import Bank...	-0.5	-0.2	-0.2	-0.2	-0.2	-0.1
Energy security reserve.............	*	*	0.1	0.2	0.5	0.9
Agricultural credit insurance fund......	0.5	---	*	*	*	*
Commodity price support and related programs............	0.6	4.1	0.1	1.9	3.1	3.7
FHA mortgage credit..	0.4	0.5	0.2	0.1	---	*
FDIC.................	0.9	0.9	0.8	0.7	0.5	0.4
FSLIC................	0.1	-0.1	-0.4	-0.4	-0.5	-0.3
Social security......	1.1	1.0	0.8	0.8	0.7	0.7
VA loan guarantee revolving fund......	0.5	-0.2	---	---	---	---
OCS receipts.........	-0.8	-0.2	---	---	---	---
Net interest.........	0.4	-0.6	-0.2	-1.4	-3.2	-1.6
Other................	-2.6	2.2	1.3	1.3	0.6	-0.5
Subtotal, technical	0.7	7.4	2.4	2.9	1.5	3.2
Total changes......	1.2	4.2	1.3	2.4	0.2	-1.7
Mid-Session estimate.....	809.8	848.1	918.3	990.9	1058.0	1123.6

* $50 million or less.

Revised economic assumptions.--The major outlay changes caused by the revised economic assumptions are for social security, food stamps, and other programs indexed to inflation; unemployment compensation; and net interest. In addition, the defense budget, for which no adjustment was made in April, has been adjusted for 1984 only, to reflect inflation changes since the President's January Budget submission. Revised economic assumptions result in a net increase in estimated outlays of $0.2 billion in 1983, and a net reduction in outlays of $2.8 billion in 1984. Revised economic assumptions reduce outlays by $0.6 billion to $5.0 billion in each subsequent year.

Slightly higher inflation than assumed in April (as measured by the Consumer Price Index) increases social security cost-of-living increases by $0.4 billion in 1985. The April estimates assumed an increase of 4.2% in January 1985, as compared to the current projection of 4.4%.

Higher estimated outlays for the food stamp program also are attributable to the revised inflation assumptions.

Lower unemployment rates than forecast in April, especially for insured unemployment, reduce estimated outlays for unemployment compensation by $0.3 billion in 1983 and $2.8 billion in 1984. Unemployment rates in subsequent years also are assumed to be lower than in April, which reduces outlays in those years.

Estimates of net interest are higher than the April estimates in 1983-86, and lower in 1987 and 1988. These revisions are the net effect of higher interest rates and lower Treasury borrowing requirements.

Revised Administration policy.--The only major revisions to Administration policy since April are an increase in funding for the Environmental Protection Agency's (EPA) operational programs and the "superfund" account to reflect the President's decision to increase EPA resources, and an adjustment to the defense budget. The defense budget for 1984 has been revised consistent with adjustments made to the MX Peacekeeper missile program.

Congressional action or inaction.--Congressional action (or inaction) that differs from Administration policy increased outlays by $0.4 billion in 1983 and $0.1 billion in 1984. These actions include enactment of the Legislative, Energy and Water, and HUD/Independent Agencies appropriation bills.

Technical reestimates.--Several major technical factors have also affected the April estimates. These technical reestimates are estimated to increase outlays by $0.7 billion in 1983 and $7.4 billion in 1984. Technical reestimates are estimated to increase outlays by $1.5 billion to $3.2 billion in each subsequent year.

The major technical changes include the following:

- Export-Import Bank. A reduction in obligations for direct loans and a shift in the pattern of claim payments on guaranteed loans have reduced estimated outlays for the Export-Import Bank by $0.5 billion in 1983 and $0.2 billion in 1984.

- Energy security reserve. The April estimates for this program inadvertently omitted a large share of the outlays for the Synfuels Corporation in the 1985 to 1988 time period. Increased outlays for this program reflect correction of this omission.

- Agricultural credit insurance fund. Increased borrowing and a decline in prepayments and repayments increases outlays by $0.5 billion in 1983.

- Commodity price support and related programs. Higher than previously anticipated levels of production under the payment-in-kind (PIK) program are estimated to increase outlays for the program by $0.6 billion in 1983 and $4.1 billion in 1984. Outlays in subsequent years also are expected to exceed the April estimates by $0.1 billion to $3.7 billion.

-- FHA mortgage credit. Reduced receipts from premium collections and higher defaults than previously anticipated increase outlays for this program by $0.4 billion in 1983 and $0.5 billion in 1984.

-- Federal Deposit Insurance Corporation (FDIC). Increased outlays of $0.9 billion in 1983 and 1984, and smaller amounts in subsequent years, reflect a reestimate to include the cost to the FDIC of bank closings and mergers. Costs for these closings and mergers had previously not been estimated.

-- Federal Savings and Loan Insurance Corporation (FSLIC). Reduced outlays in each year beginning in 1984 reflect the improved outlook for the savings and loan industry resulting from the stronger economy and the increased diversification of assets permitted by the Garn-St. Germain Act of 1982.

-- Social security. Increases for social security outlays reflect a relaxation of disability rules, a decline in the estimated number of deaths, and an increase in benefits to credit people for work after age 62.

-- VA loan guarantee revolving fund. Lower than previously anticipated asset sales, together with higher than anticipated payments on loan guarantees, increase outlays by $0.5 billion in 1983.

-- OCS receipts. Higher than previously anticipated receipts from the Outer Contintental Shelf reduce 1983 outlays by $0.8 billion. The $0.2 billion reduction in 1984 outlays reflects a shift in a sale from 1983 to 1984.

-- Net interest. The method used to estimate interest costs on savings bonds and on issues held by Government accounts was reviewed thoroughly and revised substantially. As a result, the estimates of net interest were reduced by $0.6 billion in 1984 and $0.2 billion to $3.2 billion in subsequent years.

BUDGET AUTHORITY

Budget authority in 1984 is $908.9 billion, $2.5 billion greater than the April estimate of $906.4 billion. Budget authority exceeds the April estimate in each subsequent year, with the exception of 1986.

Table 5 shows the changes in budget authority for 1983 through 1988. They are primarily for the same programs and for the same reasons as described in the outlay section. The major exceptions are for social security, medicare, international security assistance, guaranteed student loans, and housing assistance.

Budget authority for social security and medicare is based on receipts and interfund borrowing between these trust funds. These receipts change because of higher nominal incomes and technical reestimates of borrowing between funds.

A proposal to replenish the amount of funds available to make the guarantee payments of the foreign military sales program increases budget authority by $0.3 billion in 1985.

Congressional failure to approve an Administration request to rescind program funds no longer necessary due to a decline in interest rates increases budget authority for guaranteed student loans by $0.9 billion in 1983.

Budget authority for housing assistance is increased by $6.0 billion in 1984 because of congressional inaction on the Administration's voucher proposal.

Table 5.--CHANGE IN BUDGET AUTHORITY
(in billions of dollars)

	Estimates					
	1983	1984	1985	1986	1987	1988
January budget..........	847.4	900.1	997.4	1079.6	1162.7	1251.7
Changes...............	20.4	6.2	0.2	2.9	-2.5	-5.1
April estimate..........	867.9	906.4	997.6	1082.5	1160.2	1246.6
Revised economic assumptions:						
Social security.....	0.7	0.8	1.2	2.0	2.4	3.3
Medicare............	---	0.1	0.2	0.3	0.3	0.4
Food stamps..........	---	0.3	0.4	0.5	0.6	0.6
Unemployment compensation.......	0.1	-1.3	-1.0	-0.3	0.1	-0.5
National defense....	---	-3.5	---	---	---	---
Net interest........	0.5	1.8	0.2	*	-0.9	-4.0
Other...............	---	0.2	0.2	0.2	0.2	0.2
Subtotal, economic.......	1.3	-1.6	1.1	2.7	2.7	*

Table 5.--CHANGE IN BUDGET AUTHORITY (cont.)
(in billions of dollars)

	Estimates					
	1983	1984	1985	1986	1987	1988
Policy changes:						
National defense....	-0.5	-1.4	---	---	---	---
International Security Assistance (Guarantee Reserve Fund)...............	---	---	0.3	0.3	0.3	0.1
EPA operations and hazardous waste programs...........	---	0.3	0.2	0.2	0.1	0.2
Other...............	---	0.1	*	*	*	---
Subtotal, policy	-0.5	-1.1	0.5	0.5	0.4	0.3
Congressional action or inaction:						
Guaranteed student loans..............	0.9	*	-*	*	*	---
Housing assistance..	0.1	6.0	---	---	---	---
Other...............	0.5	-0.2	*	-*	-0.1	-*
Subtotal, congressional..	1.5	5.8	-*	-*	-0.1	-*
Technical reestimates:						
Export-Import Bank..	-3.0	0.4	0.5	0.2	0.1	0.1
Agricultural credit insurance fund.....	0.6	---	---	*	*	*
Commodity price support and related programs...........	-0.1	0.6	6.1	2.7	3.6	3.8
Social security.....	-0.3	-0.4	-1.5	-6.9	-2.6	0.5
Medicare............	0.1	-0.9	0.5	0.8	1.0	0.5
OCS receipts........	-0.8	-0.2	---	---	---	---
Net interest........	0.4	-0.6	-0.2	-1.4	-3.2	-1.6
Other...............	0.4	0.5	0.6	0.4	0.7	0.4
Subtotal, technical......	-2.6	-0.6	5.9	-4.2	-0.4	3.6
Total changes...	-0.3	2.5	7.5	-1.0	2.6	3.9
Mid-Session estimate....	867.6	908.9	1,005.1	1,081.5	1,162.8	1,250.6

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* $50 million or less.

THE CREDIT BUDGET

The credit budget covers new direct loan obligations and new guaranteed loan commitments. 1/ New direct loan obligations are currently estimated at $49.2 billion in 1983 and $40.3 billion in 1984. New guaranteed loan commitments are estimated at $107.0 billion in 1983 and $90.4 billion in 1984.

In comparison to the April estimates, Mid-Session estimates of direct loan obligations are $3.0 billion lower in 1983 and $2.1 billion higher in 1984. Mid-Session estimates of guaranteed loan commitments are $3.7 billion higher in 1983 and $8.3 billion lower in 1984. Overall, the credit budget totals are higher than the April estimates by $0.7 billion in 1983 and lower by $6.3 billion in 1984. These changes, which are detailed in Table 6, are due primarily to technical reestimates and policy changes.

The highlights of changes in estimates of new direct loan obligations are:

Technical Reestimates

-- a decrease of $2.8 billion in new Export-Import Bank direct loan obligations in 1983 due to decreased loan demand from export sectors of the U.S. heavy capital goods industry;

-- decreases of $0.9 billion in the agricultural credit insurance fund (ACIF) and $0.2 billion in the Small Business Administration (SBA) disaster loan fund to reflect reduced need for disaster relief loans in 1983;

-- a decrease in direct loans, guaranteed by the Tennessee Valley Authority (TVA) and made by the Federal Financing Bank (FFB), to the Seven States Energy Corporation due to reduced purchases of nuclear fuel;

-- an increase in Commodity Credit Corporation (CCC) direct loan obligations of $0.5 billion in 1983 due to higher than previously anticipated participation in the loan program. Increases from April estimates in CCC direct loan obligations expected for the period 1984 through 1988 are due to reduced commodity price expectations and increases in project and program participation; and

-- increases in 1983 direct loan obligations for several programs as a result of borrower defaults on guaranteed loans. These reestimates, which total $0.8 billion, include the Veterans Administration loan guaranty revolving fund ($0.3 billion), the Foreign Military Sales

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1/ The budget authority and outlay effects of loan and loan guarantee programs are included in other sections of the Mid-Session Review.

(FMS) guarantee reserve fund ($0.2 billion), the Maritime Administration Federal ship financing (MarAd FSF) fund ($0.1 billion), the Federal Housing Administration (FHA) fund ($0.1 billion) and guaranteed student loans ($0.1 billion).

Highlights of changes in new guaranteed loan commitments are:

Policy Changes

-- an increase of $5.0 billion in guaranteed loan commitments by the FHA fund in 1983 to reflect higher anticipated demand for mortgage credit. In 1984 and 1985, however, guaranteed loan commitments are estimated to decrease by $8.7 billion and $4.8 billion, respectively, due to reduced demand for the guarantees;

Technical Reestimates

-- an increase of $0.8 billion in guaranteed student loans due to a higher demand in 1983. Demand for student loan guarantees is also expected to be higher by $0.4 billion in 1984;

-- a decrease of $1.7 billion in Export-Import Bank guaranteed loan commitments for 1983 due to reduced demand for the guarantees; and

-- a decrease of $0.3 billion in guaranteed loan commitments from the Maritime Administration Federal ship financing fund due to reduced demand for the guarantees.

Table 6.--CHANGE IN THE CREDIT BUDGET TOTALS -
DIRECT LOAN OBLIGATIONS AND GUARANTEED LOAN COMMITMENTS
(in billions of dollars)

	1983	1984	1985	1986	1987	1988
January budget	151.8	137.6	138.4	140.5	140.5	141.5
Changes	3.8	-0.6	0.5	0.2	0.6	0.6
April total	155.5	137.0	138.9	140.7	141.0	142.1
New direct loan obligations:						
Congressional action or inaction:						
Housing for the elderly or handicapped	---	0.2	---	---	---	---
Community development grants	---	0.2	---	---	---	---
Technical reestimates:						
FMS guarantee reserve fund	0.2	0.1	0.1	0.1	0.1	0.1
Ex-Im Bank	-2.8	---	---	---	---	---
Geothermal resource	0.1	*	*	---	---	---
TVA	-0.2	-0.3	-0.4	-0.3	-0.5	-0.8

Table 6.--CHANGE IN THE CREDIT BUDGET TOTALS - DIRECT LOAN OBLIGATIONS AND GUARANTEED LOAN COMMITMENTS (cont.)

(in billions of dollars)

	1983	1984	1985	1986	1987	1988
CCC..................	0.5	1.9	2.3	1.9	2.7	3.9
Agricultural credit insurance fund.......	-0.9	-0.3	-0.3	-0.3	-0.3	-0.3
FHA fund..............	0.1	0.1	-*	-*	-*	-*
Rural housing insurance fund.......	---	---	-0.3	-0.1	-0.2	-0.2
SBA disaster loans....	-0.2	---	---	---	---	---
MarAd FSF Fund........	0.1	---	---	---	---	---
Rural development insurance fund.......	-0.2	0.1	0.1	0.1	0.1	0.1
Guaranteed student loans................	0.1	0.1	*	*	-*	-*
VA loan guarantee revolving fund.......	0.3	---	---	---	---	---
Other.................	---	---	0.1	-0.1	---	---
Subtotal, direct loan changes.........	-3.0	2.1	1.6	1.3	1.9	2.7
New guaranteed loan commitments:						
Policy changes:						
FHA Fund..............	5.0	---	---	---	---	---
Congressional action or inaction:						
Guaranteed student loans................	0.2	---	---	---	---	---
Technical reestimates:						
Ex-Im Bank............	-1.7	---	---	---	---	---
Geothermal resource...	-0.1	-*	*	---	---	---
FHA fund..............	---	-8.7	-4.8	-1.2	---	---
MarAd FSF Fund........	-0.3	---	---	---	---	---
Rural development insurance fund.......	-0.2	---	---	---	---	---
Guaranteed student loans................	0.8	0.4	0.2	-*	-*	-*
Other.................	---	---	---	---	-*	---
Subtotal, guaranteed loan changes.........	3.7	-8.3	-4.6	-1.2	-0.1	*
Total changes.........	0.7	-6.3	-3.0	0.1	1.8	2.7
Mid-Session estimate of credit budget total......	156.2	130.7	135.9	140.8	142.9	144.9

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* $50 million or less.

OFF-BUDGET FEDERAL ENTITIES

The Mid-Session estimates of outlays of off-budget Federal entities are below April estimates by $0.5 billion in 1983 and $0.4 billion in 1984. The estimated changes are above the April estimates for 1985 through 1987 and slightly lower for 1988. Table 7 shows these changes.

The increases in estimated Federal Financing Bank (FFB) outlays over 1984-1988 are largely due to projected increases of sales of certificates of beneficial ownership (financial assets) by the agricultural credit insurance fund, part of the Farmers Home Administration, to the FFB. In addition, estimated Foreign Military Sales credit direct loans are lower in 1983 because of delayed military purchases by foreign governments. This reduction in 1983 and 1984 will be offset by increased direct loans in 1985 and 1986.

These increases in FFB outlays are partly offset by expected decreases in Postal Service net outlays due to the effects of economic assumptions. In particular, lower inflation is estimated to result in lower than previously anticipated prices for postal services, which should increase demand for the services. This is expected to result in higher receipts.

Table 7.--CHANGE IN OUTLAYS OF OFF-BUDGET FEDERAL ENTITIES
(in billions of dollars)

	1983	1984	1985	1986	1987	1988
January budget...........	17.0	14.0	10.5	9.4	9.6	9.2
Changes................	-0.2	0.4	0.1	-0.1	-0.1	-0.2
April estimate...........	16.8	14.4	10.5	9.4	9.5	9.0
Technical reestimates:						
Federal Financing Bank................	-0.1	0.4	1.0	0.9	0.5	0.4
Economic assumptions:						
Postal Service.......	-0.3	-0.8	-0.3	-0.2	-0.1	-0.7
Total changes......	-0.5	-0.4	0.7	0.7	0.4	-0.2
Mid-Session estimate.....	16.3	14.0	11.2	10.1	9.9	8.8

CURRENT SERVICES

Current services estimates reflect the estimated costs (and receipts) of the Federal Government under existing laws, without proposed future changes, whether the proposals are by the Administration or by the Congress. Current services estimates for 1983-1988 have been revised, as shown in the accompanying table. These new current services estimates include the effects of revised economic assumptions and technical reestimates, as well as the effects of the Jobs Bill, the Social Security Amendments of 1983, and other legislation enacted since transmittal of the budget in January.

Changes since April.--The major differences from the April estimates are due to revisions of the economic assumptions that underlie the current services projections, the inclusion of enacted legislation in the current services estimates, and a conceptual change for national defense.

Current services receipts are higher than in April primarily because of the stronger economic recovery that is now assumed for 1983 and 1984 and enactment of the Social Security Amendments of 1983.

Current services outlays for 1984-1988 are lower than projected in April, primarily because of revised economic assumptions, social security reform, and the conceptual change for national defense. The Jobs Bill and enacted appropriations partially offset these declines in 1984-1988 and account for most of the increase since April in the 1983 current services outlay estimate.

The national defense current services estimates are comprised of the January 1983 budget request for 1984-1988. The 1983 estimate is the enacted level plus transmitted supplemental requests. The April current services defense baseline was the February 1982 budget request. This conceptual change reduces current services outlays for national defense by $8-11 billion per year during 1984-1988.

Table 8 lists the causes of change in current services deficits.

Comparison with Administration Proposals.--For 1984, the current services estimate of outlays is $17.9 billion above the Administration level. The current services receipts level for 1984 is $2.8 billion below the Administration's proposals. The 1984 current services deficit of $200.4 billion exceeds the administration's estimated deficit by $20.7 billion. Table 9 shows the effect of the Administration's proposals.

By 1988, the current services estimate of outlays exceeds the Administration's budget request by $66.0 billion. The 1988 current services receipts estimate is $61.6 billion less than the Administration's proposals. The current services deficit for 1988 is estimated to be $127.6 billion higher than the deficit under the Administration's proposals for that year. Major differences between the current services estimates and the Administration's proposals are shown in Tables 10 and 11.

Table 8.--CHANGE IN CURRENT SERVICES DEFICITS
(in billions of dollars)

	1983	1984	1985	1986	1987	1988
On-budget deficit:						
January estimate	208.5	231.5	253.1	270.8	291.7	300.4
Changes	-2.3	-5.4	-11.5	-10.7	-12.9	-20.6
April estimate	206.2	226.1	241.6	260.1	278.9	279.8
Deficit effect of changes in:						
Receipts:						
Social security amendments	---	-6.0	-8.4	-8.8	-10.9	-23.2
Other (largely economic)	-1.6	-14.0	-15.2	-16.7	-16.6	-15.9
Subtotal, receipts changes	-1.6	-20.0	-23.6	-25.5	-27.5	-39.1
Outlays:						
National defense (conceptual)	0.2	-8.3	-7.9	-9.1	-10.3	-11.0
Health (largely medicare and medicaid)	-0.4	-0.4	-0.7	-0.7	-1.2	-1.7
Income security (largely social security and unemployment compensation)	2.6	-2.9	-2.4	-2.2	-2.8	-4.3
Net interest	1.4	2.2	-3.2	-5.7	-9.8	-15.1
Other major changes (largely technical):						
CCC and agricultural credit	0.5	1.6	1.0	1.3	1.2	1.2
FDIC	0.9	0.9	0.8	0.7	0.5	0.4
OCS receipts	-0.8	-0.2	---	---	---	---
Employer share, employee retirement (social security amendments)	-*	-0.2	-0.4	-0.6	-0.8	-1.3
All other (mostly technical or enacted appropriations)	0.8	1.6	0.7	0.7	0.2	1.0
Subtotal, outlay changes	5.2	-5.7	-12.1	-15.6	-23.0	-30.8
Total deficit effect of changes	3.6	-25.7	-35.7	-41.1	-50.5	-69.9

Table 8.--CHANGE IN CURRENT SERVICES DEFICITS (cont.)
(in billions of dollars)

	1983	1984	1985	1986	1987	1988
Mid-Session estimate...........................	209.8	200.4	205.9	219.0	228.4	209.8
Off-budget deficit:						
January estimate................................	16.9	17.1	14.2	13.6	16.4	15.1
Changes......................................	-0.4	0.1	-0.3	-0.3	-0.6	-0.5
April estimate..................................	16.5	17.1	13.9	13.3	15.7	14.6
Changes......................................	-0.3	-0.1	0.4	0.2	-0.1	-0.3
Mid-Session estimate...........................	16.2	17.1	14.3	13.5	15.6	13.8
Mid-Session estimate including off-budget deficit.	226.0	217.4	220.2	232.6	244.1	223.6

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* $50 million or less.

Table 9.--COMPARISON OF CURRENT SERVICES AND PROPOSED BUDGET TOTALS
(in billions of dollars)

	1984	1985	1986	1987	1988
Receipts:					
Current services..............	665.6	742.5	812.6	883.8	979.8
Effect of proposals 1/.....	2.8	5.6	49.4	55.9	61.6
Administration policy.........	668.4	748.1	861.9	939.7	1,041.4
Outlays:					
Current services..............	866.0	948.4	1,031.6	1,112.2	1,189.6
Effect of proposals........	-17.9	-30.1	-40.7	-54.2	-66.0
Administration policy.........	848.1	918.3	990.9	1,058.0	1,123.6
Deficit (-):					
Current services..............	200.4	205.9	219.0	228.4	209.8
Effect of proposals........	-20.7	-35.7	-90.1	-110.1	-127.6
Administration policy.........	179.7	170.2	129.0	118.4	82.3
Off-budget outlays:					
Current services..............	17.1	14.3	13.5	15.6	13.8
Effect of proposals........	-3.0	-3.1	-3.4	-5.7	-5.0
Administration policy.........	14.0	11.2	10.1	9.9	8.8

1/ Includes the effect of the proposed October 1983 Federal employee pay freeze on Federal employee retirement contributions and on Old Age and Survivors, Disability, and Health Insurance (OASDHI) receipts.

Table 10.--COMPARISON OF CURRENT SERVICES AND PROPOSED BUDGET RECEIPTS

	1984	1985	1986	1987	1988
Current services..................	665.6	742.5	812.6	883.8	979.8
Contingency tax plan...........	---	---	43.0	48.7	53.0
Other changes:					
Taxation of health insurance premiums.........	2.4	4.7	6.3	7.7	9.6
Contributions to Civil Service retirement.........	1.2	2.3	2.1	1.9	1.7
Enterprise zone tax incentives.................	-0.1	-0.4	-0.8	-1.1	-1.1
Tuition tax credit..........	-0.2	-0.5	-0.8	-0.8	-0.8
Higher education tax incentive..................	-*	-0.1	-0.2	-0.3	-0.4
Other 1/..................	-0.4	-0.4	-0.4	-0.4	-0.5
Subtotal, other changes.	2.8	5.6	6.3	7.2	8.6
Total proposed changes..	2.8	5.6	49.4	55.9	61.6
Mid-Session proposed budget......	668.4	748.1	861.9	939.7	1041.4

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* $50 million or less.

1/ Includes the effect of the proposed October 1983 Federal employee pay freeze on Federal employee retirement contributions and on OASDHI receipts.

Table 11.--COMPARISON OF CURRENT SERVICES AND PROPOSED BUDGET OUTLAYS

	1984	1985	1986	1987	1988
Current services...............	866.0	948.4	1,031.6	1,112.2	1,189.6
Non-defense civilian pay....	-1.5	-1.7	-1.7	-1.8	-1.9
Reforms and COLA delay in Civilian Federal retirement programs...................	-0.3	-0.9	-1.1	-1.6	-2.2
Food stamps and child nutrition (including COLA delay).....................	-1.1	-1.5	-1.7	-1.8	-2.0
AFDC-CSE/SSI................	-0.7	-1.0	-1.0	-1.0	-1.0
Medicare 1/.................	-1.6	-2.9	-4.5	-6.4	-8.7
Medicaid....................	-0.3	-0.8	-0.7	-0.7	-0.7
Farm price supports.........	-2.8	-6.7	-6.0	-5.5	-2.6
General revenue sharing.....	*	-0.1	-0.3	-0.5	-0.7
Federal employee health benefits....................	---	-*	-0.2	-0.2	-0.4
Railroad retirement.........	-0.5	-1.4	-1.0	-1.2	-1.0
National defense function...	-3.2	-0.3	-0.1	-*	0.1
Net interest................	-1.4	-2.1	-7.1	-13.6	-20.1
All other - mostly non-defense discretionary..	-4.5	-10.7	-15.3	-19.9	-24.8
Total changes............	-17.9	-30.1	-40.7	-54.2	-66.0
Mid-Session proposed budget....	848.1	918.3	990.9	1,058.0	1,123.6

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* $50 million or less.

1/ Including premiums and collections.

PROJECTIONS OF OUTLAYS FOR OPEN-ENDED PROGRAMS AND FIXED COSTS

Outlay projections for open-ended programs and fixed costs are shown in Table 12, as required by Section 221(b) of the Legislative Reorganization Act of 1970.

These projections indicate that, under existing legislation and the economic assumptions shown in Table 2, payments for individuals are estimated to grow by roughly 7.2% a year from 1984 to 1988. Total open-ended programs and fixed costs are projected to comprise 56.1% of total budget outlays in 1988, a decrease from the 1984 share of 58.1%.

Table 12.--PROJECTIONS OF OUTLAYS FOR OPEN-ENDED PROGRAMS AND FIXED COSTS*
(in millions of dollars)

Open-Ended Programs and Fixed Costs	Estimate				
	1984	1985	1986	1987	1988
Payments for individuals:					
Social security and railroad retirement	183,356	194,856	209,694	223,870	239,271
Federal employees retirement and insurance	50,250	53,055	56,619	60,066	63,669
Unemployment compensation	21,753	21,144	20,706	19,561	18,414
Medical care	87,387	100,119	111,113	123,832	138,221
Assistance to students	4,041	3,904	3,670	3,455	3,301
Food and nutrition assistance	3,347	3,552	3,796	4,107	4,425
Public assistance and related programs	20,936	21,531	21,834	22,206	23,227
All other uncontrollable payments for individuals	2,886	2,891	2,945	2,974	2,983
Subtotal, payments for individuals	373,956	401,051	430,378	460,071	493,512
Net interest	103,365	112,190	120,242	126,287	127,893
General revenue sharing	4,567	4,567	4,567	4,567	4,567
Other open-ended programs and fixed costs	10,518	8,927	7,920	7,753	4,797
Total, open-ended programs and fixed costs	492,406	526,735	563,107	598,678	630,769

* This table is supplied pursuant to the requirements of Section 221(b) of the Legislative Reorganization Act of 1970 (P.L. 91-510).

SPENDING FROM BALANCES OF BUDGET AUTHORITY AVAILABLE AT THE END OF FISCAL YEAR 1984: NON-MANDATORY PROGRAMS

Section 221(b) of the Legislative Reorganization Act of 1970 amended the Budget and Accounting Act of 1921 to require that the President transmit to the Congress "summaries of estimated expenditures, in fiscal years following such ensuing fiscal year 1984, this year, of balances carried over from such ensuing fiscal year." Table 13 presents these estimates.

The Mid-Session estimate of the balances at the end of fiscal year 1984 for programs that have controllable outlays is $644.0 billion. About $35.3 billion of this total is in guarantee and insurance program balances, very little of which is expected ever to be spent. The spending pattern from the balances in other programs, which amount to $608.7 billion, is fairly consistent among the programs. The bulk of the spending from balances takes place in 1985, and declines rapidly thereafter. About 34.3% is expected to be spent in 1985 and approximately 14.1% in 1986. About 40.7% ($247.7 billion) is expected to remain unexpended at the end of fiscal year 1988. An estimated $1.1 billion of the 1984 end-of-year balances is expected to expire (without being spent) during fiscal years 1985 through 1988.

Table 13.--ESTIMATED SPENDING FROM END OF FISCAL YEAR 1984 BALANCES OF BUDGET AUTHORITY: NON-MANDATORY PROGRAMS*

(in billions of dollars)

	Federal Guarantee and Insurance Programs: Reserves for Losses, and Standby and Backup Authority	Other Unexpended Balances, September 30, 1984	Total
Total balances, end of 1984 (Mid-Session estimate).........	35.3	608.7	644.0
Spending from balances in:			
1985......................	---	208.6	208.6
1986......................	---	85.8	85.8
1987......................	---	40.1	40.1
1988......................	---	25.3	25.3
Expiring balances, 1985 through 1988..................	---	1.1	1.1
Unexpended balances as of the end of 1988...............	35.3	247.7 1/	283.0

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* This table is supplied pursuant to the requirements of Section 221(b) of the Legislative Reorganization Act of 1970 (P.L. 91-510).

1/ Includes $212.8 billion in subsidized Housing (HUD) unexpended balances.

Table 14.--BUDGET RECEIPTS BY MAJOR SOURCE
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Individual income taxes	297.7	288.2	294.2	331.0	373.7	409.0	459.8	288.5	296.0	332.1	377.5	414.8	467.8
Corporation income taxes..................	49.2	33.4	54.2	63.9	78.8	95.5	106.4	35.2	64.1	76.5	91.0	105.6	114.5
Social insurance taxes and contributions.....	201.5	211.8	240.0	270.9	298.9	322.0	361.0	211.1	241.4	271.6	299.8	323.7	361.9
Excise taxes............	36.3	35.3	35.9	36.5	62.4	64.4	65.7	34.9	36.5	36.9	62.5	64.2	65.4
Estate and gift taxes..	8.0	6.1	5.9	5.6	5.1	4.6	4.3	6.0	5.9	5.6	5.1	4.6	4.3
Customs duties.........	8.9	8.4	9.1	9.5	9.8	10.1	10.6	8.4	9.3	9.7	10.0	10.2	10.7
Miscellaneous receipts.	16.2	15.2	14.4	15.0	15.2	15.8	16.2	15.9	15.1	15.7	16.0	16.5	16.7
Total budget receipts.........	617.8	598.3	653.7	732.4	843.8	921.3	1022.9	599.9	668.4	748.1	861.9	939.7	1041.4

Table 15.--BUDGET OUTLAYS BY FUNCTION
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
National defense........	187.4	214.8	245.4	285.2	323.0	354.3	385.6	214.8	242.3	285.2	323.1	354.3	385.7
International affairs..	10.0	11.9	13.4	13.5	13.1	12.7	12.6	11.0	13.5	13.7	13.1	12.6	12.6
General science, space and technology........	7.1	7.8	8.2	8.4	7.9	7.7	7.1	7.8	8.3	8.4	7.9	7.7	7.1
Energy..................	4.7	4.5	3.6	2.8	2.9	2.8	3.2	4.6	3.8	3.2	3.2	3.3	4.0
Natural resources and environment............	12.9	12.7	10.3	9.6	9.0	8.6	8.5	12.5	10.8	10.0	9.3	8.9	8.7
Agriculture............	14.9	24.2	9.7	10.7	9.5	9.9	10.0	25.3	13.8	10.8	11.4	13.0	13.7
Commerce and housing credit................	3.9	3.3	0.9	-2.0	-2.4	-1.9	-2.5	5.1	2.8	-1.1	-1.6	-2.0	-2.9
Transportation..........	20.6	21.9	25.9	26.6	27.0	27.6	28.1	21.1	25.9	26.9	27.0	27.5	27.9
Community and regional development............	7.2	7.7	7.7	7.3	6.7	6.5	6.4	7.4	7.8	7.2	6.7	6.6	6.5
Education, training, employment, and social services...............	26.3	27.4	25.3	25.0	24.8	24.8	25.1	27.2	26.5	25.2	25.1	25.0	25.0
Health..................	74.0	82.8	90.6	100.6	109.4	120.2	132.5	82.3	90.5	100.3	109.5	120.0	131.8
(Medicare)............	(46.6)	(53.3)	(59.7)	(67.5)	(74.3)	(82.6)	(92.1)	(53.2)	(59.8)	(67.5)	(74.6)	(82.6)	(91.7)
(Other)...............	(27.4)	(29.5)	(30.9)	(33.2)	(35.2)	(37.6)	(40.4)	(29.1)	(30.7)	(32.8)	(35.0)	(37.4)	(40.1)
Income security.........	248.3	278.9	276.5	288.9	306.0	321.7	340.1	279.4	275.2	288.3	306.3	322.2	340.1
(Social security)....	(154.1)	(168.5)	(176.9)	(189.0)	(203.1)	(217.5)	(232.6)	(169.4)	(178.0)	(190.2)	(204.4)	(218.7)	(233.6)
(Other)...............	(94.2)	(110.3)	(99.6)	(99.8)	(102.8)	(104.2)	(107.5)	(109.9)	(97.2)	(98.1)	(101.9)	(103.6)	(106.5)
Veterans benefits and services..............	24.0	24.5	25.6	26.2	26.9	27.7	28.7	24.9	25.5	26.3	27.0	27.8	28.9
Administration of justice................	4.7	5.3	5.5	5.5	5.5	5.6	5.7	5.3	5.5	5.6	5.6	5.6	5.7
General government......	4.7	5.8	6.0	6.0	6.1	6.1	6.3	5.8	5.6	5.7	5.8	6.0	6.2
General purpose fiscal assistance............	6.4	6.4	6.8	6.7	6.9	7.1	7.3	6.4	6.8	6.6	6.8	7.1	7.3
Net interest............	84.7	88.0	102.3	114.0	123.7	132.7	135.8	89.0	103.5	114.0	122.4	128.6	130.2
Allowances..............	---	---	0.9	3.6	5.5	7.5	9.6	---	0.9	3.6	5.6	7.7	9.8
Undistributed offsetting receipts...	-13.3	-19.1	-20.8	-21.8	-23.2	-23.8	-24.8	-19.9	-21.0	-21.8	-23.2	-23.8	-24.8
Total budget outlays............	728.4	808.5	843.9	917.0	988.4	1,057.9	1,125.3	809.8	848.1	918.3	990.9	1,058.0	1,123.6
ADDENDUM:													
Off-budget outlays.....	17.3	16.8	14.4	10.5	9.4	9.5	9.0	16.3	14.0	11.2	10.1	9.9	8.8

Table 16.--BUDGET AUTHORITY BY FUNCTION
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
National defense........	218.7	245.7	280.5	329.8	364.8	397.0	432.7	245.3	275.3	329.9	364.9	397.1	432.8
International affairs..	15.3	25.8	16.7	16.4	15.7	15.5	16.0	23.0	17.1	17.2	16.4	16.0	16.2
General science, space and technology.........	7.1	7.9	8.5	8.4	7.7	7.7	6.8	7.9	8.5	8.4	7.7	7.7	6.8
Energy...................	3.3	4.0	2.9	3.2	3.2	3.2	3.7	3.8	3.1	3.4	3.2	3.1	3.7
Natural resources and environment............	11.2	12.3	9.0	9.2	8.9	8.5	8.4	12.4	9.5	9.5	9.2	8.7	8.7
Agriculture..............	18.8	21.2	13.5	9.8	8.3	9.1	9.1	21.7	14.2	15.9	11.0	12.6	12.9
Commerce and housing credit................	6.4	5.1	7.6	5.6	4.5	4.5	4.3	5.2	7.8	5.7	4.6	4.4	4.2
Transportation..........	21.3	26.9	27.8	28.5	29.3	29.2	29.7	26.9	27.7	28.4	29.2	29.0	29.6
Community and regional development............	6.6	8.6	6.0	6.5	6.5	6.5	6.5	8.2	6.3	6.5	6.6	6.6	6.6
Education, training, employment, and social services...............	25.9	26.7	25.5	24.8	24.9	25.0	25.1	28.0	25.8	25.0	25.1	25.1	25.1
Health...................	78.9	71.3	94.3	104.2	121.1	127.2	135.3	71.4	93.6	104.6	121.8	128.2	135.9
(Medicare)............	(51.4)	(46.3)	(64.1)	(71.3)	(85.9)	(89.5)	(94.9)	(46.4)	(63.3)	(71.9)	(86.9)	(90.8)	(95.9)
(Other)................	(27.5)	(25.0)	(30.2)	(33.0)	(35.2)	(37.7)	(40.4)	(25.0)	(30.3)	(32.7)	(34.9)	(37.4)	(40.1)
Income security.........	254.2	300.9	287.2	310.2	335.1	362.8	399.2	301.6	292.8	309.8	331.0	364.1	403.6
(Social security)....	(146.2)	(183.0)	(177.7)	(198.8)	(216.1)	(234.8)	(269.4)	(183.5)	(178.1)	(198.5)	(211.2)	(234.6)	(273.2)
(Other)................	(108.0)	(117.8)	(109.5)	(111.4)	(119.0)	(128.0)	(129.8)	(118.2)	(114.7)	(111.4)	(119.8)	(129.5)	(130.4)
Veterans benefits and services...............	25.0	25.1	26.0	26.6	27.6	28.5	29.4	25.3	25.8	26.7	27.6	28.6	29.6
Administration of justice................	4.7	5.3	5.5	5.6	5.5	5.6	5.7	5.3	5.6	5.6	5.5	5.7	5.8
General government......	5.0	5.9	6.0	6.1	6.3	6.3	6.5	5.9	5.6	5.9	6.0	6.2	6.3
General purpose fiscal assistance.............	6.4	6.3	6.8	6.7	6.9	7.1	7.3	6.3	6.8	6.6	6.8	7.1	7.3
Net interest.............	84.7	88.0	102.3	114.0	123.7	132.7	135.8	89.0	103.5	114.0	122.4	128.6	130.2
Allowances..............	---	---	0.9	3.6	5.6	7.6	9.7	---	0.9	3.7	5.6	7.7	9.9
Undistributed offsetting receipts...	-13.3	-19.1	-20.8	-21.8	-23.2	-23.8	-24.8	-19.9	-21.0	-21.8	-23.2	-23.8	-24.8
Total budget authority..........	779.9	867.9	906.4	997.6	1082.5	1160.2	1246.6	867.6	908.9	1005.1	1081.5	1162.8	1250.6
ADDENDUM:													
Off-budget budget authority..............	34.0	29.5	27.9	23.1	20.1	20,2	24.7	29.2	26.8	23.7	20.4	19.8	20.4

Table 17.--BUDGET OUTLAYS BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Legislative Branch.....	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.5	1.6	1.6	1.7	1.7	1.7
The Judiciary..........	0.7	0.8	0.9	1.0	1.0	1.0	1.1	0.8	0.9	1.0	1.0	1.0	1.1
Executive Office of the President.............	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Funds Appropriated to the President..........	6.1	7.4	7.9	8.1	8.0	8.0	7.9	7.2	8.1	8.6	8.3	8.1	8.0
Department of Agriculture............	36.2	48.3	32.1	32.2	31.7	32.1	32.4	49.5	36.7	32.9	34.4	36.1	37.1
Department of Commerce.	2.0	2.0	1.8	1.7	1.5	1.6	1.6	2.0	1.8	1.7	1.5	1.6	1.6
Department of Defense - Military..............	182.9	209.0	238.7	277.4	314.9	345.6	377.0	208.9	235.7	277.4	314.9	345.6	377.0
Department of Defense - Civil..................	3.0	3.2	2.2	2.3	2.2	2.4	2.6	3.0	2.4	2.3	2.2	2.4	2.6
Education Activities...	14.1	14.8	13.4	13.3	13.0	12.9	13.0	14.6	14.5	13.5	13.2	13.1	13.0
Energy Activities......	7.6	8.9	9.1	9.8	10.2	10.7	10.7	9.2	9.2	10.0	10.2	10.7	10.7
Department of Health and Human Services....	251.3	275.2	281.4	303.7	328.2	353.6	381.7	275.8	288.9	311.5	335.5	361.1	389.5
Department of Housing and Urban Development.	14.5	15.2	14.3	13.1	12.8	13.9	14.6	16.0	15.3	13.3	13.0	13.6	14.0
Department of Interior.	3.9	4.3	3.9	3.1	2.7	3.5	3.7	4.3	4.0	3.2	2.8	3.6	3.7
Department of Justice..	2.6	3.0	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.4	3.3	3.3	3.3
Department of Labor....	30.7	39.0	30.3	28.8	27.6	26.6	25.8	39.0	27.9	26.8	25.8	24.9	24.1
Department of State....	2.2	2.3	2.6	2.7	2.8	2.9	3.0	2.3	2.6	2.7	2.8	2.9	3.0
Department of Transportation........	19.9	21.1	25.1	25.9	26.3	26.9	27.4	20.4	25.1	26.2	26.2	26.7	27.1
Department of the Treasury..............	110.5	117.0	142.0	156.0	168.8	180.1	189.3	117.0	136.8	149.6	162.6	171.6	177.8
Environmental Protection Agency.....	5.1	4.4	4.1	4.0	3.8	3.6	3.4	4.4	4.2	4.2	4.0	3.8	3.6
National Aeronautics and Space Administration.................	6.0	6.7	7.0	7.0	6.4	6.3	5.7	6.7	7.0	7.0	6.4	6.3	5.7
Veterans Administration	23.9	24.4	25.6	26.2	26.9	27.6	28.6	24.9	25.4	26.2	27.0	27.8	28.8
Office of Personnel Management............	20.0	21.3	23.0	24.1	26.0	27.8	29.6	21.2	23.0	24.0	26.1	27.9	29.8
Other Independent Agencies..............	13.1	14.0	12.0	11.0	10.5	9.9	9.5	14.0	12.4	11.0	10.4	9.8	9.7
Allowances.............	---	---	0.9	3.6	5.5	7.5	9.6	---	0.9	3.6	5.6	7.7	9.8
Undistributed offsetting receipts...	-29.3	-35.4	-39.6	-43.0	-47.5	-51.5	-56.9	-36.0	-39.9	-43.4	-48.4	-53.1	-59.0
Total budget outlays.............	728.4	808.5	843.9	917.0	988.4	1,057.9	1,125.3	809.8	848.1	918.3	990.9	1,058.0	1,123.6

Table 18.--BUDGET AUTHORITY BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Legislative Branch.....	1.4	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.7
The Judiciary..........	0.7	0.8	0.9	1.0	1.0	1.0	1.1	0.8	0.9	1.0	1.0	1.0	1.1
Executive Office of the President.............	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Funds Appropriated to the President.........	8.5	18.9	9.8	9.3	8.3	8.7	8.8	19.1	9.9	9.6	9.2	9.0	9.0
Department of Agriculture...........	40.6	45.5	38.6	32.9	30.6	31.4	31.7	45.9	39.7	39.6	34.1	36.0	36.5
Department of Commerce.	1.8	1.9	1.4	1.4	1.4	1.5	1.6	1.9	1.4	1.4	1.4	1.5	1.6
Department of Defense - Military..............	213.8	239.6	273.4	321.4	356.4	388.3	424.3	239.1	268.5	321.4	356.4	388.3	424.3
Department of Defense - Civil..................	3.0	3.4	2.1	2.3	2.2	2.4	2.6	3.4	2.2	2.3	2.2	2.4	2.6
Education Activities...	14.7	14.0	13.1	13.1	13.1	13.1	13.1	15.2	13.4	13.3	13.3	13.2	13.1
Energy Activities......	7.9	8.7	9.0	10.8	10.7	11.0	11.0	8.9	8.9	11.0	10.7	10.9	11.0
Department of Health and Human Services....	246.2	277.5	286.0	317.1	352.7	377.8	421.3	278.3	291.5	324.0	354.6	385.2	433.3
Department of Housing and Urban Development.	20.1	11.7	7.2	4.3	8.5	14.5	9.6	11.9	13.5	4.4	8.5	14.4	9.4
Department of Interior.	3.7	4.3	3.4	3.1	2.8	3.6	3.6	4.4	3.5	3.2	2.9	3.6	3.7
Department of Justice..	2.6	3.0	3.3	3.4	3.2	3.3	3.3	3.0	3.3	3.4	3.2	3.3	3.3
Department of Labor....	27.2	37.2	32.5	31.6	31.9	32.7	35.6	37.5	31.5	30.9	31.7	33.0	35.4
Department of State....	2.6	2.7	2.9	3.0	3.1	3.2	3.3	2.7	2.9	3.0	3.1	3.2	3.3
Department of Transportation........	20.5	26.2	27.0	27.7	28.6	28.4	29.0	26.2	26.9	27.6	28.5	28.3	28.8
Department of the Treasury...............	111.3	117.2	142.1	156.3	169.1	180.3	188.4	117.4	136.9	149.8	162.7	171.4	177.1
Environmental Protection Agency.....	3.7	3.7	3.6	3.7	3.7	3.4	3.4	3.7	3.9	3.9	3.9	3.5	3.5
National Aeronautics and Space Administration..................	6.0	6.8	7.1	7.0	6.3	6.3	5.4	6.8	7.2	7.0	6.3	6.3	5.4
Veterans Administration	24.9	25.0	25.9	26.6	27.5	28.4	29.4	25.3	25.7	26.6	27.6	28.6	29.6
Office of Personnel Management............	32.6	36.0	38.3	43.5	45.3	47.4	49.4	36.0	38.8	43.6	45.3	47.4	49.5
Other Independent Agencies..............	15.2	17.4	15.6	15.8	15.6	15.6	16.3	14.3	15.6	16.1	15.8	15.7	16.5
Allowances.............	---	---	0.9	3.6	5.6	7.6	9.7	---	0.9	3.7	5.6	7.7	9.9
Undistributed offsetting receipts...	-29.3	-35.4	-39.6	-43.0	-47.5	-51.5	-56.9	-36.0	-39.9	-43.4	-48.4	-53.1	-59.0
Total budget authority...........	779.9	867.9	906.4	997.6	1082.5	1160.2	1246.6	867.6	908.9	1005.1	1081.5	1162.8	1250.6

Table 19.--THE CREDIT BUDGET TOTALS
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
New direct loan obligations:													
On-budget...........	40.1	42.3	29.3	26.8	22.9	21.3	25.5	39.4	31.4	28.7	24.5	23.7	24.7
Off-budget..........	27.5	27.8	22.9	21.4	18.1	17.5	22.1	27.6	23.3	21.7	18.4	17.7	17.6
Less: New FFB purchases of loan assets 1/..........	12.6	11.4	7.6	5.6	1.8	0.8	5.2	11.2	8.0	6.1	2.4	1.4	1.5
Less: Agency repurchases of loan assets sold to the FFB 2/.............	7.4	6.7	6.4	4.8	1.3	0.4	4.6	6.7	6.4	4.8	1.3	0.4	0.2
Subtotal, new direct loan obligations...	47.6	52.1	38.3	37.9	37.9	37.6	37.9	49.2	40.3	39.5	39.2	39.6	40.6
New guaranteed loan commitments 3/.......	53.7	103.4	98.7	101.0	102.8	103.4	104.3	107.0	90.4	96.4	101.6	103.3	104.3
Total..........	101.3	155.5	137.0	138.9	140.7	141.0	142.1	156.2	130.7	135.9	140.8	142.9	144.9

1/ To avoid double counting, new loan assets purchased from agencies by the Federal Financing Bank are deducted. The amount of the loan assets are already recorded as direct loans by the originating agency. This deduction affects new obligations and disbursements.

2/ To avoid double counting, agency repurchases of loan assets previously sold to the Federal Financing Bank are deducted. The amount of repurchases are already recorded as direct loan obligations by the originating agency. This deduction affects new obligations and disbursements.

3/ To avoid double counting, excludes commitments for guarantees of loans previously guaranteed and for guarantees by one Government account of direct loans made by another Government account.

Table 20.--THE CREDIT BUDGET BY FUNCTION
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
National defense:													
Direct Loan Obligations.......	*	---	---	---	---	---	---	---	---	---	---	---	---
Guaranteed Loan Commitments.......	---	---	---	---	---	---	---	---	---	---	---	---	---
International affairs:													
Direct Loan Obligations.......	9.0	11.1	11.4	11.7	11.8	11.8	11.9	8.5	11.5	11.8	11.8	11.9	12.0
Guaranteed Loan Commitments.......	6.1	8.3	10.3	10.3	10.3	10.3	10.3	6.6	10.3	10.3	10.3	10.3	10.3
General science, space, and technology:													
Direct Loan Obligations.......	0.1	0.2	*	---	---	---	---	0.2	*	---	---	---	---
Guaranteed Loan Commitments.......	---	---	---	---	---	---	---	---	---	---	---	---	---
Energy:													
Direct Loan Obligations.......	10.4	11.3	10.2	10.8	11.2	11.7	11.9	11.2	9.9	10.4	10.9	11.2	11.1
Guaranteed Loan Commitments.......	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Natural resources and environment:													
Direct Loan Obligations.......	*	0.1	*	*	*	*	*	0.1	0.1	0.1	*	*	*
Guaranteed Loan Commitments.......	---	---	---	---	---	---	---	---	---	---	---	---	---
Agriculture:													
Direct Loan Obligations.......	15.7	18.1	11.0	9.7	9.6	9.1	8.9	17.8	12.7	11.7	11.2	11.5	12.5
Guaranteed Loan Commitments.......	1.6	4.9	3.1	3.1	3.1	3.1	3.1	4.9	3.1	3.1	3.1	3.1	3.1

Table 20.--THE CREDIT BUDGET BY FUNCTION (cont.)
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Commerce and housing credit:													
Direct Loan Obligations.......	7.6	6.4	2.1	2.5	2.3	2.2	2.3	6.5	2.3	2.1	2.1	2.1	2.0
Guaranteed Loan Commitments.......	18.5	48.6	42.3	41.9	41.0	40.6	40.6	53.7	33.6	37.1	39.8	40.6	40.7
Secondary Guaranteed Loan Commitments 1/...	36.4	68.2	58.6	58.6	58.6	58.6	58.6	68.2	68.2	58.6	58.6	58.6	58.6
Transportation:													
Direct Loan Obligations.......	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1
Guaranteed Loan Commitments.......	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.3	0.6	0.6	0.6	0.6	0.6
Community and regional development:													
Direct Loan Obligations.......	1.2	1.9	0.9	1.0	0.9	0.9	1.2	1.5	1.2	1.0	1.0	1.0	1.2
Guaranteed Loan Commitments.......	0.2	0.3	*	*	*	*	*	0.1	*	*	*	*	*
Education, training, employment, and social services:													
Direct Loan Obligations.......	1.2	0.6	0.4	0.5	0.6	0.6	0.7	0.7	0.5	0.5	0.6	0.6	0.7
Guaranteed Loan Commitments.......	6.2	6.8	7.4	7.9	8.4	8.7	9.1	7.7	7.8	8.1	8.4	8.7	9.0
Health:													
Direct Loan Obligations.......	*	*	*	*	*	*	*	*	*	*	*	*	*
Guaranteed Loan Commitments.......	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Income security:													
Direct Loan Obligations.......	0.9	1.0	1.0	0.8	0.5	0.3	0.1	1.0	1.0	0.8	0.5	0.3	0.1
Guaranteed Loan Commitments.......	13.3	14.6	14.7	16.5	18.1	18.5	18.5	14.6	14.7	16.5	18.1	18.5	18.5

Table 20.--THE CREDIT BUDGET BY FUNCTION (cont.)
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Veterans benefits and services:													
Direct Loan Obligations.......	0.9	0.8	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9	0.9	0.9	0.9
Guaranteed Loan Commitments.......	6.0	18.6	19.9	20.4	21.0	21.3	21.7	18.6	19.9	20.4	21.0	21.3	21.7
General Government:													
Direct Loan Obligations.......	*	---	---	---	---	---	---	---	---	---	---	---	---
Guaranteed Loan Commitments.......	---	---	---	---	---	---	---	---	---	---	---	---	---
General purpose fiscal assistance:													
Direct Loan Obligations.......	0.3	0.3	0.1	---	---	---	---	0.3	0.1	---	---	---	---
Guaranteed Loan Commitments.......	0.6	---	---	---	---	---	---	---	---	---	---	---	---
Total:													
Direct Loan Obligations.......	47.6	52.1	38.3	37.9	37.9	37.6	37.9	49.2	40.3	39.5	39.2	39.6	40.6
Guaranteed Loan Commitments.......	53.7	103.4	98.7	101.0	102.8	103.4	104.3	107.0	90.4	96.4	101.6	103.3	104.3
Total credit budget	101.3	155.5	137.0	138.9	140.7	141.0	142.1	156.2	130.7	135.9	140.8	142.9	144.9

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* $50 million or less.

1/ The Government National Mortgage Association (GNMA) guarantees loans that are previously insured by the Federal Housing Administration, the Veterans Administration and the Farmers Home Administration. To avoid double counting, these secondary guarantees are not included in the credit budget totals.

Table 21.--NEW DIRECT LOAN OBLIGATIONS BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
On-budget agencies:													
Funds appropriated to the President...	1.8	2.3	2.2	2.5	2.5	2.6	2.6	2.5	2.2	2.5	2.6	2.6	2.7
Agriculture.........	27.7	29.9	18.7	16.2	12.4	11.0	15.3	29.3	20.5	18.0	14.0	13.4	14.4
Commerce............	*	*	---	---	---	---	---	*	---	---	---	---	---
Defense.............	*	---	---	---	---	---	---	---	---	---	---	---	---
Education...........	0.5	0.6	0.4	0.5	0.6	0.6	0.7	0.7	0.5	0.5	0.6	0.6	0.7
Energy..............	*	*	*	*	*	*	*	*	*	*	*	*	*
Health and Human Services...........	*	*	*	*	*	*	*	*	*	*	*	*	*
Housing and Urban Development........	4.0	2.6	1.8	1.6	1.3	1.1	1.0	2.7	2.0	1.6	1.3	1.1	1.0
Interior............	*	0.1	0.1	0.1	*	*	*	0.1	0.1	0.1	0.1	*	*
Justice.............	---	---	---	---	---	---	---	---	---	---	---	---	---
Labor...............	*	*	*	*	*	*	*	*	*	*	*	*	*
State...............	*	*	*	*	*	*	*	*	*	*	*	*	*
Transportation......	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1
Veterans Administration.....	0.9	0.8	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9	0.9	0.9	0.9
Independent agencies:													
District of Columbia.........	0.3	0.3	0.1	---	---	---	---	0.3	0.1	---	---	---	---
Export-Import Bank..............	3.5	3.8	3.8	3.8	3.8	3.8	3.8	1.0	3.8	3.8	3.8	3.8	3.8
National Credit Union Administration...	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Small Business Administration...	0.9	1.4	1.0	0.9	0.9	0.8	0.8	1.2	1.0	0.9	0.9	0.8	0.8
Other...............	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal, on-budget agencies......	40.1	42.3	29.3	26.0	22.9	21.3	25.5	39.4	31.4	28.7	24.5	23.7	24.7

Table 21.--NEW DIRECT LOAN OBLIGATIONS BY AGENCY (cont.)
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Off-budget entities:													
Rural Electrification Administration.....	1.3	1.3	0.8	0.8	0.8	0.8	0.8	1.3	0.8	0.8	0.8	0.8	0.8
Federal Financing Bank................	26.2	26.5	22.1	20.7	17.3	16.8	21.4	26.3	22.5	20.9	17.6	16.9	16.9
Other off-budget entities...........	*	---	---	---	---	---	---	---	---	---	---	---	---
Subtotal, off-budget entities......	27.5	27.8	22.9	21.4	18.1	17.5	22.1	27.6	23.3	21.7	18.4	17.7	17.6
Less: Loan assets sold to the FFB (-) 1/.........	12.6	11.4	7.6	5.6	1.8	0.8	5.2	11.2	8.0	6.1	2.4	1.4	1.5
Less: Repurchases of loan assets sold to the FFB (-) 2/.........	7.4	6.7	6.4	4.8	1.3	0.4	4.6	6.7	6.4	4.8	1.3	0.4	0.2
Total..........	47.6	52.1	38.3	37.9	37.9	37.6	37.9	49.2	40.3	39.5	39.2	39.6	40.6

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* $50 million or less.

1/ To avoid double counting new loan assets purchased from agencies by the Federal Financing Bank are deducted. The amount of the loan assets are already recorded as direct loans by the originating agency.

2/ To avoid double counting, agency repurchases of loan assets previously sold to the Federal Financing Bank are deducted. The amount of the repurchases are already recorded as direct loan obligations by the originating agency.

Table 22.--NEW GUARANTEED LOAN COMMITMENTS BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Funds Appropriated to the President.....	3.3	4.4	5.0	5.0	5.0	5.0	5.0	4.4	5.0	5.0	5.0	5.0	5.0
Agriculture 1/........	19.5	21.3	14.0	12.1	8.3	7.3	11.7	21.0	14.4	12.6	8.9	7.9	8.0
Commerce..............	0.1	0.1	---	---	---	---	---	0.1	---	---	---	---	---
Education.............	6.9	6.8	7.4	7.9	8.4	8.7	9.1	7.7	7.8	8.1	8.4	8.7	9.0
Energy................	---	0.2	0.2	---	---	---	---	0.1	0.1	*	---	---	---
Health and Human Services.............	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Housing and Urban Development..........	68.4	129.0	113.2	114.9	116.6	116.9	117.0	134.0	114.3	110.1	115.4	116.9	117.0
Interior..............	*	*	*	*	*	*	*	*	*	*	*	*	*
Transportation........	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.4	0.6	0.6	0.6	0.6	0.6
Treasury..............	0.6	---	---	---	---	---	---	---	---	---	---	---	---
National Aeronautics and Space Administration.......	0.1	0.2	*	---	---	---	---	0.2	*	---	---	---	---
Veterans Administration.......	6.0	18.6	19.9	20.4	21.0	21.3	21.7	18.6	19.9	20.4	21.0	21.3	21.7
Independent agencies:													
Export-Import Bank..	5.8	8.0	10.0	10.0	10.0	10.0	10.0	6.3	10.0	10.0	10.0	10.0	10.0
Small Business Administration.....	2.1	3.6	2.8	2.4	1.5	1.2	1.2	3.7	2.8	2.5	1.5	1.1	1.1
Tennessee Valley Authority..........	4.5	5.4	6.3	6.8	7.2	7.7	7.9	5.2	6.0	6.5	6.9	7.2	7.1
Other independent agencies...........	*	*	*	*	*	*	*	*	*	*	*	*	*
Less:													
Secondary guaranteed loans (-) 2/.......	36.4	68.2	58.6	58.6	58.6	58.6	58.6	68.2	68.2	58.6	58.6	58.6	58.6
Guaranteed loans held as direct loans (-) 3/.......	28.2	27.0	22.1	20.7	17.3	16.8	21.4	26.8	22.5	20.9	17.6	16.9	16.9
Total..........	53.7	103.4	98.7	101.0	102.8	103.4	104.3	107.0	90.4	96.4	101.6	103.3	104.3

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* $50 million or less.

1/ Includes Rural Electrification Administration off-budget activities as follows: 1982, $5.6 billion; 1983 $5.2 billion; 1984, $3.8 billion; 1985, $3.8 billion; 1986, $3.8 billion; 1987, $3.9 billion; and 1988, $3.9 billion.

2/ To avoid double counting, excludes commitments for guarantees, of loans previously guaranteed.

3/ To avoid double counting, excludes guarantees by one government account of direct loans made by another government account.

Table 23.--CURRENT SERVICES RECEIPTS BY MAJOR SOURCE
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Individual income taxes	297.7	288.2	293.1	326.1	356.4	389.4	437.7	288.5	294.6	329.5	362.5	398.0	447.3
Corporation income taxes..................	49.2	33.4	54.1	64.0	77.6	92.1	101.2	35.2	64.1	76.6	89.6	101.7	109.8
Social insurance taxes and contributions.....	201.5	211.8	233.0	262.2	290.2	311.6	337.6	211.1	240.0	268.5	296.5	320.2	358.0
Excise taxes...........	36.3	35.3	35.9	36.5	32.8	32.7	33.2	34.9	36.5	36.9	33.0	32.6	32.9
Estate and gift taxes..	8.0	6.1	5.9	5.6	5.1	4.6	4.3	6.0	5.9	5.6	5.1	4.6	4.3
Customs duties.........	8.9	8.4	9.1	9.5	9.8	10.1	10.6	8.4	9.3	9.7	10.0	10.2	10.7
Miscellaneous receipts.	16.2	15.2	14.4	15.0	15.2	15.8	16.2	15.9	15.1	15.6	15.9	16.5	16.7
Total current services receipts	617.8	598.3	645.5	718.9	787.1	856.3	940.7	599.9	665.6	742.5	812.6	883.8	979.8

Table 24.--CURRENT SERVICES OUTLAYS BY FUNCTION
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
National defense.......	187.4	214.6	253.7	293.4	332.2	364.7	396.6	214.8	245.4	285.5	323.2	354.4	385.6
International affairs..	10.0	11.6	13.0	12.9	12.9	13.0	13.4	10.8	13.1	13.0	12.8	13.0	13.6
General science, space and technology........	7.1	7.8	8.1	8.1	7.5	7.4	6.9	7.8	8.2	8.3	7.9	7.8	7.2
Energy..................	4.7	4.4	4.2	3.8	3.8	3.7	4.1	4.6	4.4	4.1	4.1	4.1	4.8
Natural resources and environment...........	12.9	12.2	11.5	11.2	10.8	10.7	10.6	12.3	12.0	11.5	11.1	10.8	10.9
Agriculture............	14.9	24.8	15.3	16.8	16.6	17.8	15.8	25.3	16.9	17.8	17.8	19.0	16.9
Commerce and housing credit................	3.9	3.3	2.4	0.4	-0.2	0.5	-*	5.1	3.3	1.3	1.0	0.8	0.9
Transportation.........	20.6	21.7	26.2	27.4	28.5	29.8	31.3	21.1	26.0	27.3	28.3	29.5	30.9
Community and regional development...........	7.2	7.4	7.2	7.5	7.6	7.9	8.3	7.4	7.9	7.6	7.5	7.8	7.9
Education, training, employment, and social services..............	26.3	27.2	26.7	28.5	29.5	30.9	32.5	27.2	27.9	28.7	29.9	31.1	32.4
Health..................	74.0	82.6	92.8	105.5	116.5	129.9	144.9	82.3	92.4	104.8	115.8	128.7	143.2
(Medicare)...........	(46.6)	(53.3)	(61.4)	(70.6)	(79.0)	(89.4)	(101.2)	(53.2)	(61.4)	(70.5)	(79.1)	(89.0)	(100.4)
(Other)..............	(27.4)	(29.4)	(31.4)	(34.9)	(37.5)	(40.5)	(43.8)	(29.1)	(31.1)	(34.3)	(36.8)	(39.6)	(42.8)
Income security.........	248.3	276.8	281.4	296.5	314.7	332.6	353.1	279.4	278.5	294.1	312.5	329.9	348.8
(Social security)....	(154.1)	(169.7)	(179.4)	(192.0)	(206.6)	(221.9)	(237.8)	(169.4)	(178.0)	(190.3)	(204.5)	(218.8)	(233.8)
(Other)..............	(94.2)	(107.1)	(102.0)	(104.6)	(108.1)	(110.8)	(115.3)	(110.0)	(100.5)	(103.8)	(108.0)	(111.1)	(115.0)
Veterans benefits and services..............	24.0	24.4	25.9	26.5	27.2	27.9	29.0	24.9	25.5	26.4	27.1	27.9	29.0
Administration of justice...............	4.7	5.3	5.4	5.5	5.7	5.8	6.0	5.3	5.4	5.5	5.6	5.8	5.9
General government.....	4.7	5.7	5.9	5.9	5.9	6.0	6.2	5.9	5.4	5.5	5.6	5.8	6.0
General purpose fiscal assistance............	6.4	6.4	7.1	7.2	7.7	8.1	8.5	6.4	6.8	7.0	7.4	7.8	8.2
Net interest............	84.7	87.5	102.7	119.2	135.2	152.0	165.4	89.0	104.9	116.1	129.4	142.3	150.3
Allowances..............	---	---	1.8	3.7	5.7	7.8	10.0	---	1.9	3.8	5.8	8.0	10.2
Undistributed offsetting receipts...	-13.3	-19.1	-19.6	-19.4	-20.8	-21.3	-22.0	-19.9	-20.0	-19.8	-21.3	-22.1	-23.3
Total current services outlays..	728.4	804.6	871.6	960.5	1047.2	1135.2	1220.5	809.7	866.0	948.4	1031.6	1112.2	1189.6
ADDENDUM:													
Off-budget outlays.....	17.3	16.5	17.2	13.9	13.3	15.7	14.6	16.2	17.1	14.3	13.5	15.6	13.8

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* $50 million or less.

Table 25.--CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
National defense........	218.7	244.5	291.8	339.4	375.4	408.7	445.1	-245.3	280.6	330.1	364.9	397.1	432.7
International affairs..	15.3	16.5	16.6	18.3	18.4	18.6	19.3	13.6	16.9	18.7	18.6	18.8	19.5
General science, space and technology.........	7.1	7.9	8.1	7.9	7.3	7.4	6.7	7.9	8.3	8.3	7.8	7.8	7.0
Energy..................	3.3	3.9	4.1	4.3	4.1	4.1	4.7	3.8	4.3	4.5	4.1	4.0	4.7
Natural resources and environment............	11.2	11.3	11.1	11.3	11.2	11.1	11.2	12.3	11.1	11.5	11.5	11.3	11.4
Agriculture.............	18.8	23.8	13.6	14.1	15.5	16.5	15.3	21.7	15.4	16.6	13.4	15.6	16.7
Commerce and housing credit.................	6.4	5.1	5.9	5.9	6.7	7.6	7.9	5.2	5.6	6.1	6.8	7.0	7.6
Transportation..........	21.3	26.7	28.5	29.7	30.9	32.3	33.9	26.9	28.4	29.5	30.7	32.0	33.5
Community and regional development............	6.6	6.8	7.0	7.7	8.2	8.5	8.8	8.2	6.7	7.4	7.8	8.1	8.4
Education, training, employment, and social services...............	25.9	26.4	27.8	29.2	30.5	31.9	33.4	28.0	28.1	29.5	30.8	32.0	33.5
Health..................	78.9	67.7	92.4	104.0	116.7	128.7	141.3	71.4	94.6	107.4	126.0	134.2	144.1
(Medicare)............	(51.4)	(43.0)	(61.0)	(68.7)	(78.7)	(87.6)	(96.8)	(46.4)	(63.7)	(72.8)	(88.7)	(93.9)	(100.6)
(Other)...............	(27.5)	(24.7)	(31.4)	(35.3)	(38.0)	(41.1)	(44.5)	(24.9)	(30.9)	(34.6)	(37.2)	(40.2)	(43.5)
Income security.........	254.2	281.6	302.0	328.5	354.1	376.6	404.4	303.2	295.8	321.9	339.8	367.8	413.1
(Social security)....	(146.2)	(163.1)	(182.8)	(206.3)	(225.0)	(243.4)	(263.2)	(183.5)	(177.8)	(197.6)	(209.9)	(232.9)	(271.1)
(Other)...............	(108.0)	(118.5)	(119.2)	(122.3)	(129.1)	(133.2)	(141.1)	(119.8)	(118.0)	(124.3)	(129.9)	(134.8)	(142.0)
Veterans benefits and services...............	25.0	25.0	26.0	26.7	27.5	28.4	29.4	25.1	25.8	26.7	27.5	28.5	29.5
Administration of justice................	4.7	5.2	5.5	5.6	5.8	5.9	6.1	5.2	5.5	5.6	5.8	5.9	6.1
General government......	5.0	5.7	5.9	6.0	6.1	6.2	6.3	6.0	5.5	5.7	5.8	6.0	6.2
General purpose fiscal assistance.............	6.4	6.4	7.1	7.2	7.7	8.1	8.5	6.4	6.8	7.0	7.4	7.8	8.2
Net interest............	84.7	87.5	102.7	119.2	135.2	152.0	165.4	89.0	104.9	116.1	129.4	142.3	150.3
Allowances..............	---	---	1.9	3.8	5.8	7.9	10.1	---	2.0	3.8	5.9	8.1	10.3
Undistributed offsetting receipts...	-13.3	-19.1	-19.6	-19.4	-20.8	-21.3	-22.0	-19.9	-20.0	-19.8	-21.3	-22.1	-23.3
Total current services budget authority..........	779.9	832.8	938.3	1049.5	1146.3	1239.4	1335.7	859.3	926.2	1036.6	1122.5	1212.0	1319.4
ADDENDUM:													
Off-budget budget authority..............	34.0	29.5	34.1	28.2	25.5	25.8	30.7	29.1	33.1	28.5	25.3	25.0	23.9

Table 26.--CURRENT SERVICES OUTLAYS BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Legislative Branch.....	1.4	1.5	1.6	1.6	1.6	1.6	1.7	1.5	1.6	1.6	1.6	1.6	1.7
The Judiciary..........	0.7	0.8	0.9	0.9	1.0	1.0	1.0	0.8	0.9	0.9	1.0	1.0	1.0
Executive Office of the President.............	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Funds Appropriated to the President.........	6.1	7.1	7.6	7.9	8.1	8.3	8.7	7.0	7.9	8.1	8.1	8.4	8.7
Department of Agriculture...........	36.2	48.6	38.6	40.6	40.8	42.7	41.3	49.4	40.6	42.0	42.7	44.5	43.1
Department of Commerce.	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.2
Department of Defense - Military..............	182.8	208.8	247.0	285.5	324.0	356.0	388.1	206.9	238.6	277.5	314.9	345.6	377.0
Department of Defense - Civil.................	3.0	2.9	2.7	2.7	2.8	2.8	2.8	3.0	2.9	2.8	2.8	2.8	2.8
Education Activities...	14.1	14.8	13.9	15.0	15.4	15.2	17.1	14.6	14.9	15.1	15.7	16.3	17.1
Energy Activities......	7.6	8.9	9.6	10.6	10.9	11.4	11.4	9.3	9.8	10.8	11.0	11.3	11.3
Department of Health and Human Services....	251.3	275.9	293.2	319.5	345.4	374.5	406.6	275.8	292.8	318.5	344.6	372.7	404.0
Department of Housing and Urban Development.	14.5	15.1	15.1	14.5	15.2	16.9	18.4	16.0	15.7	15.0	16.1	17.1	18.8
Department of Interior.	3.9	4.1	4.1	3.6	3.3	4.1	4.1	4.3	4.4	3.7	3.5	4.3	4.4
Department of Justice..	2.6	3.0	3.0	3.0	3.1	3.1	3.2	3.0	3.0	3.0	3.1	3.1	3.2
Department of Labor....	30.7	36.0	30.3	29.5	28.9	28.2	27.7	39.0	28.5	27.7	27.0	26.4	25.8
Department of State....	2.2	2.3	2.5	2.5	2.6	2.7	2.8	2.3	2.6	2.6	2.7	2.8	2.9
Department of Transportation.........	19.9	21.0	25.4	26.6	27.8	29.1	30.6	20.4	25.2	26.6	27.6	28.8	30.2
Department of the Treasury...............	110.5	116.2	134.2	152.9	172.8	191.9	209.8	117.0	137.8	151.0	168.4	183.3	195.5
Environmental Protection Agency.....	5.1	4.4	4.1	4.1	4.0	4.0	4.1	4.4	4.1	4.1	3.9	4.0	4.1
National Aeronautics and Space Administration.................	6.0	6.7	6.9	6.9	6.2	6.1	5.5	6.7	6.9	7.0	6.4	6.3	5.7
Veterans Administration	23.9	24.4	25.8	26.5	27.2	27.9	28.8	24.9	25.5	26.3	27.0	27.8	28.8
Office of Personnel Management............	20.0	21.3	23.4	25.0	27.5	29.9	32.5	21.2	23.2	24.9	27.4	29.7	32.3
Other Independent Agencies..............	13.1	13.6	13.6	13.6	13.3	13.3	13.1	14.1	13.7	13.8	13.1	13.2	13.1
Allowances.............	---	---	1.8	3.7	5.7	7.8	10.0	---	1.9	3.8	5.8	8.0	10.2
Undistributed offsetting receipts...	-29.3	-35.0	-35.9	-38.2	-42.6	-46.5	-51.1	-36.0	-38.8	-40.7	-45.1	-49.3	-54.6
Total current services outlays....	728.4	804.6	871.6	960.5	1047.2	1135.2	1220.5	809.7	866.0	948.4	1031.6	1112.2	1189.6

Table 27.--CURRENT SERVICES BUDGET AUTHORITY BY AGENCY
(in billions of dollars)

	Actual	April Estimate						Mid-Session Estimate					
	1982	1983	1984	1985	1986	1987	1988	1983	1984	1985	1986	1987	1988
Legislative Branch.....	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.6	1.5	1.5	1.6	1.6	1.7
The Judiciary..........	0.7	0.8	0.9	1.0	1.0	1.0	1.1	0.8	0.9	1.0	1.0	1.0	1.1
Executive Office of the President.............	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Funds Appropriated to the President.........	8.6	9.7	10.1	10.8	11.0	11.1	11.3	9.7	10.0	10.7	10.9	11.1	11.2
Department of Agriculture...........	40.6	47.1	36.7	37.5	40.1	41.6	41.1	45.9	39.0	40.7	38.4	41.2	43.1
Department of Commerce.	1.8	1.7	1.9	2.0	2.1	2.2	2.2	1.8	1.9	2.0	2.1	2.2	2.2
Department of Defense - Military..............	213.8	238.4	284.7	330.9	366.8	399.9	436.7	239.1	273.4	321.6	356.4	380.3	424.3
Department of Defense - Civil.................	3.0	2.9	2.7	2.7	2.8	2.8	2.8	3.4	2.6	2.8	2.8	2.8	2.8
Education Activities...	14.7	14.2	14.8	15.6	16.3	17.1	17.9	15.2	15.1	15.8	16.5	17.2	18.0
Energy Activities......	7.9	8.6	10.1	11.6	11.3	11.7	11.8	8.9	10.3	11.9	11.4	11.6	11.7
Department of Health and Human Services....	246.2	253.7	296.2	331.9	363.6	394.3	427.8	278.2	294.4	328.1	359.7	391.8	441.6
Department of Housing and Urban Development.	20.1	12.4	20.3	19.1	22.2	24.1	25.2	13.5	16.4	20.3	21.8	22.8	24.4
Department of Interior.	3.7	3.9	4.0	3.7	3.5	4.2	4.2	4.3	4.1	3.9	3.7	4.4	4.4
Department of Justice..	2.6	2.9	3.0	3.1	3.2	3.2	3.3	2.9	3.0	3.1	3.2	3.2	3.3
Department of Labor....	27.2	36.3	29.7	32.3	33.4	34.4	37.3	37.5	31.4	31.8	32.8	34.3	36.9
Department of State....	2.6	2.7	2.8	2.8	2.9	3.0	3.1	2.7	2.8	2.9	3.0	3.1	3.2
Department of Transportation........	20.5	25.9	27.8	28.9	30.2	31.6	33.1	26.1	27.6	28.7	29.9	31.2	32.7
Department of the Treasury..............	111.3	116.4	34.2	153.1	173.1	192.1	209.9	117.4	137.9	151.2	168.5	183.2	194.8
Environmental Protection Agency.....	3.7	3.7	3.8	4.0	4.2	4.4	4.5	3.7	3.8	4.0	4.2	4.3	4.5
National Aeronautics and Space Administration...................	6.0	6.8	7.0	6.7	6.1	6.1	5.3	6.8	7.0	7.0	6.3	6.3	5.4
Veterans Administration	24.9	25.0	25.9	26.6	27.5	28.4	29.3	25.0	25.7	26.6	27.5	28.5	29.4
Office of Personnel Management............	32.6	36.0	37.3	39.6	42.0	44.5	47.2	36.0	37.3	39.4	41.6	44.2	46.8
Other Independent Agencies..............	15.2	17.0	16.6	18.2	18.4	18.7	19.6	14.4	16.6	18.5	18.4	18.8	19.8
Allowances.............	---	---	1.9	3.8	5.8	7.9	10.1	---	2.0	3.8	5.9	8.1	10.3
Undistributed offsetting receipts...	-29.3	-35.0	-35.9	-38.2	-42.6	-46.5	-51.1	-36.0	-38.8	-40.7	-45.1	-49.3	-54.6
Total current services budget authority...........	779.9	832.8	938.3	1049.5	1146.3	1239.4	1335.7	859.3	926.2	1036.6	1122.5	1212.0	1319.4

Table 28.--BUDGET FINANCING AND DEBT OUTSTANDING, 1982-1984
(in billions of dollars)

	1982 Actual	1983 Estimate		1984 Estimate	
		April	Mid-Session	April	Mid-Session
Budget Financing					
Budget surplus or deficit (-)	-110.6	-210.2	-209.8	-190.2	-179.7
Deficit (-), off-budget Federal entities	-17.3	-16.8	-16.3	-14.4	-14.0
Total, surplus or deficit (-)	-127.9	-227.0	-226.2	-204.7	-193.7
Means of financing other than borrowing from the public:					
Decrease or increase (-) in cash and other monetary assets	-11.9	7.2	7.2	---	---
Increase or decrease (-) in liabilities for:					
Checks outstanding, etc.	4.1	1.8	0.7	0.8	1.1
Deposit fund balances	0.3	0.5	1.7	-0.7	-1.9
Seigniorage on coins	0.4	0.5	0.5	0.6	0.5
Total, means of financing other than borrowing from the public	-7.1	10.0	10.2	0.7	-0.3
Total, requirements for borrowing from the public	-135.0	-217.0	-216.0	-204.0	-194.0
Change in debt held by the public	135.0	217.0	216.0	204.0	194.0
Debt Outstanding, End of Year					
Gross Federal debt:					
Debt issued by Treasury	1,142.0	1,387.4	1,386.2	1,618.1	1,607.4
Debt issued by other agencies	5.0	4.7	4.7	4.5	4.5
Total, gross Federal debt	1,147.0	1,392.0	1,390.8	1,622.6	1,611.9
Held by:					
Government agencies	217.6	245.6	245.4	272.1	272.5
The public	929.4	1,146.4	1,145.4	1,350.4	1,339.4
Debt Subject to Limit, End of Year					
Debt issued by Treasury	1,142.0	1,387.4	1,386.2	1,618.1	1,607.4
Treasury debt not subject to limit	-0.6	-0.6	-0.6	-0.6	-0.6
Agency debt subject to limit	1.5	1.4	1.4	1.3	1.3
Total, debt subject to limit 1/	1,142.9	1,388.2	1,387.0	1,618.8	1,608.1

1/ The statutory debt limit is permanently established at $1,389 billion (Public Law 98-34).

98th Congress, 1st Session - - - - - - - House Document No. 98-88

DEFERRALS

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THREE NEW DEFERRALS OF BUDGET AUTHORITY FOR FISCAL YEAR 1983 FUNDS, PURSUANT TO SECTION 1013(a) OF PUBLIC LAW 93-344

JULY 28, 1983.—Message and accompanying papers referred to the Committee on Appropriations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
11-012 O WASHINGTON : 1983

To the Congress of the United States:

In accordance with the Impoundment Control Act of 1974, I herewith report three new deferrals of budget authority totaling $16,118,000.

The deferrals affect Energy Activities and the Department of Justice.

The details of the deferrals are contained in the attached reports.

RONALD REAGAN.

THE WHITE HOUSE, *July 28, 1983.*

CONTENTS OF SPECIAL MESSAGE
(in thousands of dollars)

Deferral #	Item	Budget Authority
	Energy Activities	
	Energy programs	
D83-80	Fossil energy research and development....	15,326
	Department of Justice	
	Legal Activities	
D83-81	Salaries and expenses, General Legal Activities..............................	561
D83-82	Salaries and expenses, Antitrust Division.	231
	Total, deferrals.........................	16,118

****

SUMMARY OF SPECIAL MESSAGES
FOR FY 1983
(in thousands of dollars)

	Rescissions	Deferrals
Tenth special message		
New items..................................		16,118
Change to amounts previously submitted......	---	---
Effects of tenth special message............		16,118
Amounts previously submitted that were changed by this message....................	---	---
Total, rescissions and deferrals...........	---	16,118
Amounts previously submitted that were not changed by this message....................	1,569,015 1/	13,543,227 2/
Total amount proposed to date in all special messages...........................	1,569,015 1/	13,559,345 3/

1/ This amount includes $23,400,000 in current budget authority for the rural telephone bank that is offset by a corresponding increase in permanent budget authority (R83-20).

2/ This amount has been adjusted downward by $5.5 million to correct a discrepancy in a previous special message.

3/ All amounts listed represent budget authority except for $15,944,000 of outlays only in one general revenue sharing deferral (D83-16B).

Deferral No: D83-80

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

Agency Department of Energy **Bureau** Energy Programs	**New budget authority** (P.L. 97-377;97-394) $ 2,000,000 215,514,000 **Other budgetary resources** 136,637,249
Appropriation title & symbol Fossil Energy Research & Development 89X0213 1/	Total budgetary resources 354,151,249
	Amount to be deferred: **Part of year** ________ **Entire year** 15,326,000
OMB identification code: 89-0213-0-1-271	**Legal authority** *(in addition to sec. 1013):* ☐ **Antideficiency Act**
Grant program ☐ **Yes** ☒ **No**	☐ **Other** ________
Type of account or fund: ☐ **Annual** ☐ **Multiple-year** ________ *(expiration date)* ☒ **No-year**	**Type of budget authority:** ☒ **Appropriation** ☐ **Contract authority** ☐ **Other** ________

Justification: Funds were appropriated in FY 1983 for the Energy Technology Center (ETC) Program Direction activity to finance those indirect expenses that were previously applied to programmatic activities as an overhead charge. Since the Department believes that the FY 1983 appropriation was adequate to finance ETC Program Direction activities from the various program budgets, a like amount of programmatic funds has been displaced. Some of these funds will be used to fulfill financial commitments to various Fossil Energy in-house, university and private sector research and development projects. The remaining $15,326,000 is not required in FY 1983 and will be used to offset the FY 1984 Energy Activities budget request.

Estimated Effects: This deferral of funds will have no programmatic impact.

Outlay Effect: This deferral action will shift $15,326,000 in outlays from FY 1983 to FY 1984.

1/ This account was the subject of two proposed rescissions (R81-10 and R81-132) and a deferral (D81-51) in 1981, and two deferrals in 1982 (D82-105 and D82-236).

Deferral No: D83-81

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93-344

ency Department of Justice	**New budget authority** $136,128,000 (P.L. 97-377)
reau Legal Activities	**Other budgetary resources** 3,606,870
propriation title & symbol Salaries and Expenses General Legal Activities 1530128	Total budgetary resources 139,734,870
	Amount to be deferred: **Part of year** 561,000 **Entire year** ________
B identification code: 15-0128-0-1-752	**Legal authority** *(in addition to sec. 1013)*: ☒ **Antideficiency Act** ☐ Other ________
ant program ☐ Yes ☒ No	
pe of account or fund: ☒ Annual ☐ Multiple-year ________ *(expiration date)* ☐ No-year	Type of budget authority: ☒ Appropriation ☐ Contract authority ☐ Other ________

Justification: The primary mission of the General Legal Activities appropriation is to support the Attorney General by establishing litigation policy, conducting litigation and performing various other legal responsibilities.

Funds are to be transferred from four legal divisions within the Legal activities appropriation to the U.S. Attorneys and Marshals account. This transfer will improve the Department's field litigation efforts while retaining the ability of the legal divisions to address their program management and litigation responsibilities. This action is taken pursuant to the Antideficiency Act (31 U.S.C. 1512).

Estimated Effect: The effect of this deferral will be to preserve these funds pending congressional action on the transfer request.

Outlay Effect: This deferral action has no effect on outlays.

Deferral No: D83-82

DEFERRAL OF BUDGET AUTHORITY
Report Pursuant to Section 1013 of P.L. 93–344

Agency Department of Justice	**New budget authority** (P.L. 97-377) $43,389,000 **Other budgetary resources** ______ Total budgetary resources 43,389,000
Bureau Legal Activities	
Appropriation title & symbol Salaries and Expenses Antitrust Division 1530319 1/	**Amount to be deferred:** **Part of year** 231,000 **Entire year** ______
OMB identification code: 15-0319-0-1-752	**Legal authority** *(in addition to sec. 1013)*: ☒ **Antideficiency Act** ☐ **Other** ______
Grant program ☐ **Yes** ☒ **No**	
Type of account or fund: ☒ **Annual** ☐ **Multiple-year** ______ *(expiration date)* ☐ **No-year**	**Type of budget authority:** ☒ **Appropriation** ☐ **Contract authority** ☐ **Other** ______

Justification: The responsibilities of the Antitrust Division appropriation is to enforce the antitrust laws and thereby to promote competition -- a fundamental economic policy of the United States.

The use of automated litigation support and an increased emphasis on economic analysis in the early stages of investigation have resulted in savings by the Antitrust Division. These savings are to be transferred to the U.S. Attorneys and Marshals appropriation to support the Department's commitment to strengthen criminal and civil litigation efforts at the local level. This action is taken pursuant to the Antideficiency Act (31 U.S.C. 1512).

Estimated Effect: The effect of this deferral will be to preserve these funds pending congressional action on the transfer request.

Outlay Effect: This deferral action has no effect on outlays.

1/ This account was the subject of a deferral in FY 1982 (D82-190).

CONGRESS, 1ST SESSION HOUSE DOCUMENT NO. 98–89

A Ceremony
Unveiling the Portrait of Chairman Dan Rostenkowski

Representative in Congress From the Eighth Congressional District of the State of Illinois

COMMITTEE ON WAYS AND MEANS

WEDNESDAY, APRIL 27, 1983

10:30 A.M.

1100 Longworth House Office Building

Washington, D.C.

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1983

Ninety-eighth Congress of the United States of America

House Resolution 277

FIRST SESSION, JULY 20, 1983

Mr. GIBBONS submitted the following resolution; which was referred to the Committee on House Administration

Resolution

Resolved, That the transcript of proceedings of the Committee on Ways and Means on April 27, 1983, incident to presentation of a portrait of the Honorable Dan Rostenkowski to the Committee on Ways and Means, shall be printed as a House document with illustrations and suitable binding.

SEC. 2. In addition to the usual number, there shall be printed two hundred and sixty-one copies of such document which shall be casebound for the use of the Committee on Ways and Means.

A Ceremony
Unveiling the Portrait
of
Chairman Dan Rostenkowski

Committee on Ways and Means
U.S. House of Representatives
Wednesday, April 27, 1983

DAN ROSTENKOWSKI, Illinois Democrat, was first elected to Congress on November 4, 1958, to serve in the 86th Congress as its youngest Member. He has represented Illinois' 8th Congressional District in each succeeding term of Congress.

He was a member of the House Committee on Interstate and Foreign Commerce during the 86th, 87th, and 88th Congresses, joining the Committee on Ways and Means in 1964. Mr. Rostenkowski has served as the Chairman of the Subcommittee on Health (94th and 95th Congresses) and as Chairman of the Subcommittee on Select Revenue Measures (96th Congress). He has been a member of the Subcommittee on Trade since it was created in the 94th Congress. He was elected Chairman of the full Committee in January of 1981, at the beginning of the 97th Congress. He currently also serves as Chairman of the Joint Committee on Taxation.

In addition to his service on the Committee on Ways and Means, Mr. Rostenkowski has served as the Chairman of the Democratic Caucus, the Chief Deputy Majority Whip, a Member of the Democratic Steering and Policy Committee, and as the Vice Chairman of the Democratic Congressional Campaign Committee, a position he currently maintains.

Prior to his election to Congress, he served both as a State Representative and Senator in the Illinois General Assembly. He served with the infantry in Korea during the conflict there, and was educated at St. John's Military Academy and Loyola University of Chicago.

Mr. Rostenkowski is married to the former LaVerne Pirkins, and has four daughters: Dawn, Kristie, Gayle, and Stacy.

PROGRAM

April 27, 1983, 10:30 a.m.

Ways and Means Committee Chamber
1100 Longworth House Office Building
Washington, D.C.

MASTER OF CEREMONIES

The Honorable SAM M. GIBBONS, Chairman, Subcommittee on Trade

INVOCATION

The Reverend WALTER M. WILCZEK, C.R.

REMARKS

The Honorable THOMAS P. O'NEILL, Jr., Speaker of the House of Representatives

The Honorable GEORGE BUSH, Vice President of the United States

The Honorable JIM WRIGHT, Majority Leader of the House of Representatives

The Honorable ROBERT H. MICHEL, Minority Leader of the House of Representatives

The Honorable BARBER B. CONABLE, Jr., Ranking Minority Member, Committee on Ways and Means

UNVEILING OF THE PORTRAIT

Mrs. DAN ROSTENKOWSKI

INTRODUCTION OF THE ARTIST, Mr. ROBERT DEWAR BENTLEY

BENEDICTION

The Reverend WALTER M. WILCZEK, C.R.

COMMITTEE ON WAYS AND MEANS

U.S. House of Representatives

(98th Congress)

A Committee on Ways and Means was first established as an ad hoc committee in the first session of the First Congress, on July 24, 1789. On December 8, 1801, during the first session of the Seventh Congress, the Committee was established as a permanent standing committee of the House of Representatives.

DAN ROSTENKOWSKI, Illinois, *Chairman*

SAM M. GIBBONS, Florida
J. J. PICKLE, Texas
CHARLES B. RANGEL, New York
FORTNEY H. (PETE) STARK, California
JAMES R. JONES, Oklahoma
ANDY JACOBS, Jr., Indiana
HAROLD FORD, Tennessee
ED JENKINS, Georgia
RICHARD A. GEPHARDT, Missouri
THOMAS J. DOWNEY, New York
CECIL (CEC) HEFTEL, Hawaii
WYCHE FOWLER, Jr., Georgia
FRANK J. GUARINI, New Jersey
JAMES M. SHANNON, Massachusetts
MARTY RUSSO, Illinois
DON J. PEASE, Ohio
KENT HANCE, Texas
ROBERT T. MATSUI, California
BERYL ANTHONY, Jr., Arkansas
RONNIE G. FLIPPO, Alabama
BYRON L. DORGAN, North Dakota
BARBARA B. KENNELLY, Connecticut

BARBER B. CONABLE, Jr., New York
JOHN J. DUNCAN, Tennessee
BILL ARCHER, Texas
GUY VANDER JAGT, Michigan
PHILIP M. CRANE, Illinois
BILL FRENZEL, Minnesota
JAMES G. MARTIN, North Carolina
RICHARD T. SCHULZE, Pennsylvania
BILL GRADISON, Ohio
W. HENSON MOORE, Louisiana
CARROLL A. CAMPBELL, Jr., South Carolina
WILLIAM M. THOMAS, California

MEMBERS OF PORTRAIT COMMITTEE

Co-Chairmen

James S. Kemper, Jr.
Ray Schoessling
John G. Weithers

Thomas G. Ayers
Edward F. Brabec
Hon. George W. Dunne
Donald N. Frey
Raymond L. Floyd
J. Ira Harris
Stanley Harrison

Donald P. Kelly
Charles K. Knickerbocker
Sister Sheila Lyne
Brooks McCormick
Aloysius A. Mazewski
Robert L. Murphy

James J. O'Connor
Arnold Palmer
Thomas A. Reynolds, Jr.
Thomas B. Rosenberg
Rev. Walter M. Wilczek, C.R.
Carl Yastrzemski

The artist, ROBERT DEWAR BENTLEY, was born in New York in 1934 and is a native of Evanston and Winnetka, Illinois. He graduated from Yale University and studied at the Chicago Art Institute and with several of the country's leading portrait artists. Mr. Bentley has received many major commissions with works in homes and businesses throughout the world. He has been affiliated with, or had exhibits with, the Americana Gallery, the Chicago Art Institute, the Yale University Art Gallery and numerous others.

THE WHITE HOUSE
WASHINGTON

April 27, 1983

Dear Danny:

Congratulations on the unveiling of your portrait as Chairman of the House Committee on Ways and Means.

This ceremony is a well-deserved tribute. Your leadership and skill in guiding the Committee these past two years have earned you the respect and admiration of your colleagues and those of us who have had the good fortune to have worked with you.

The Tax Equity and Fiscal Responsibility Act, the Caribbean Basin Initiative, the Surface Transportation Assistance Act and most recently the Social Security Act Amendments of 1983 are concrete evidence of the effectiveness of your Chairmanship. I am sure that with your continued dedication and hard work, we will have many future occasions to salute your leadership as Chairman.

Over these past two years, I have always appreciated your wise counsel and advice and have valued our friendship. I look forward to continuing and strengthening our relationship in the years ahead.

Nancy and I extend to you and LaVerne our most sincere congratulations.

With best wishes,

Sincerely,

Ronald Reagan

The Honorable Dan Rostenkowski
Chairman
Committee on Ways and Means
House of Representatives
Washington, D.C. 20515

Welcoming the Chairman, from left to right: Minority Leader Robert Michel, Majority Leader Jim Wright, Vice President George Bush, former Chairman Wilbur Mills, Speaker O'Neill, Chairman Rostenkowski, Mrs. Rostenkowski, Mrs. O'Neill, daughters Gayle, Kristie and Stacy, the artist, Mr. Robert Bentley.

Reverend Walter M. Wilczek prior to offering the invocation.

A Ceremony Unveiling the Portrait of
CHAIRMAN DAN ROSTENKOWSKI

Wednesday, April 27, 1983

U.S. House of Representatives,
Committee on Ways and Means,
Washington, D.C.

The committee and guests met at 10:30 a.m., pursuant to invitation, in room 1100, Longworth House Office Building, the Honorable Sam M. Gibbons, Master of Ceremonies.

Mr. Gibbons. This meeting of the Committee on Ways and Means will come to order. I want to announce the arrival of the Chairman and Mrs. Rostenkowski, escorted by the Speaker of the House, Mr. Tip O'Neill, and the Vice President of the United States, George Bush.

[Applause.]

Mr. Gibbons. Obviously everyone in this room should be introduced, but that, of course, cannot be done. I do, however, want to introduce the Secretary of the Treasury, the Honorable Donald Regan, who is with us this morning.

[Applause.]

Mr. Gibbons. The Secretary of Health and Human Services, the Honorable Margaret Heckler.

[Applause.]

Mr. Gibbons. The Chairman of the Senate Finance Committee, the Honorable Robert Dole.

[Applause.]

Mr. Gibbons. The Deputy Chief Majority Whip of the House, Mr. Bill Alexander.

[Applause.]

Mr. Gibbons. We are going to introduce a great many others during this program, so I will skip over them now; but I would like to introduce two people who have meant so much to my career here in Congress, people whom I have worked with during their chairmanship of this committee, the Honorable Wilbur Mills.

[Applause.]

Mr. GIBBONS. And the Honorable Al Ullman and his wife Audrey.

[Applause.]

Mr. GIBBONS. We also have members of the Rostenkowski family, who are privileged to see their father occasionally, his daughters, Dawn, Kristie, Gayle, and Stacy.

[Applause.]

Mr. GIBBONS. We also have Chairman Rostenkowski's two very proud and very happy sisters, Gladys and Marcia.

[Applause.]

Mr. GIBBONS. Also with us from Illinois, State Senator Alan Dixon and his wife.

[Applause.]

Mr. GIBBONS. Mr. Vice President, Mr. Speaker, Mr. Chairman, this is an historic occasion for all of us who serve on the Committee on Ways and Means.

Almost 200 years ago this committee was founded, first as an ad hoc committee in 1789; it had a brief history. It must have been more successful in raising revenues in those days than we are now, for it lasted just a few months as an ad hoc committee. As you know, at that time the Congress had not adopted the committee system.

In 1801, a permanent standing Committee on Ways and Means was created and has existed since that time. The portraits of many of its distinguished chairmen are hung not only in this room, but are displayed as well, today, in the entrance to this building. You will find, after this meeting breaks up, if you have an opportunity to wander around, that the table in the rear of the adjoining room now contains the names of all of the chairmen of this committee.

Mr. Hughlon Greene, our Committee Clerk, who wasn't here for the first meeting of the committee, but who has attended all of them faithfully for 40 years, had his private office behind the room we are meeting in today. He has gotten all the documents out of that room and it has been reconstructed as a library so that it can be used by committee members. I want to urge you to go back there and take a look at these pieces of American history. You will find most of the verbatim transcripts of the proceedings of the Committee on Ways and Means going way back into the early 1800's, truly a collected history which historians will want to pore over. They may, perhaps, wonder, as much as some of us do in these troubled days of our country, if the present-day history we now write will be crafted with accumulated wisdom.

This hearing room has seen much history itself. Mr. Speaker, as you know, it served at one time as the Chamber for the House of Representatives when the roof across the street was about to fall in. We hope that this doesn't happen again any time soon, Mr. Speaker, but if it does, you and the other Members will be welcomed back. We will be happy to share our committee room with you.

It also brings back many fond memories for all of us who have served on the committee, both past and present. I am sure for you who follow the work of the committee that this is a room in which you perhaps figuratively bit off your fingernails as you wondered how decisions would be made.

We appreciate your coming today to participate in this ceremony. I have many fine things that I want to say about our chairman, but I am going to delay them until everyone has had a chance to speak.

Father Wilczek, will you please say the Invocation?

Invocation by the Reverend Walter M. Wilczek, C.R.

Reverend WILCZEK. With our Chicago problems, we need prayer. Let us pray.

God, Our Father, in this sanctuary of our national life, we turn to You asking that the peace of Your presence may be upon us as we pause in prayer before You. You have called many Americans to live their lives and to play a part in the history of our Nation. This morning, we use an inch of time to immortalize Congressman Dan Rostenkowski, one of the great leaders of our gifted Republic.

Grant to him beliefs big enough of heart, honorable enough, and a spirit strong enough to make him equal to the demanding duties of his office. By Your Spirit help him, as well as each of us here today, to rise above all that is narrow and petty and selfish.

Together with Your gifts of love and joy, grant to him and to those who labor with him a measure of discontent that will keep them rest-less until justice is done, the hungry are fed, the jobless find work, and children and teenagers secure a sound education.

With an increased devotion, may all of us join him in working together for the well-being of our Nation, and the welfare of mankind, becoming in this way true Americans and Your faithful children at the same time.

We also pause for a moment to pray for the great women in Congressman Rostenkowski's life, his wife LaVerne, and his daughters, Dawn, Kristie, Stacy, and Gayle. Throughout their years of marriage and family life, they have had to share husband and father with thousands of constituents, and now they share him with the Nation. May this moment of glory and this place in history comfort and compensate them in some small way for their continuing generosity and personal sacrifices.

Following their example, give us, his friends for so many years, the will to do our work well and the readiness to accept our share of responsibilities with eagerness and enthusiasm.

As we glory in this moment, we also look to the future and pray for all those needs Chairman Dan Rostenkowski will have as he daily climbs this Hill of Law with the determination of Your Faithful Son climbing the Hill of Calvary. When doubts arise, steady his faith. When temptations arise, strengthen his resistance. When faced with failure, give him the courage to try again.

We pray this in a spirit of peace and justice for all mankind. Amen.

Mr. GIBBONS. Thank you, Father. We all feel much better now, particularly the Master of Ceremonies.

As I introduce Speaker O'Neill, who needs no introduction to any audience, I would remind the Speaker of the handicap that he overcame. He became Speaker without ever having been a member of the Committee on Ways and Means.

[Laughter.]

Mr. GIBBONS. Twenty-one other Speakers found their way to the Speakership from this committee, Mr. Speaker, and we don't know what that bodes for the future.

Mr. O'Neill.

[Applause.]

Remarks of the Honorable Thomas P. O'Neill, Jr., Speaker of the House of Representatives

Speaker O'Neill. Thank you, Mr. Chairman, Sam Gibbons, Mr. Vice President, members of the President's Cabinet, both from my area of the country, my former colleagues and former chairmen whom I see here, Dan's colleagues and his many friends, his beautiful wife LaVerne, and his daughters, Dawn, Kristie, Gayle, and Stacy.

My Millie is here this morning. There is no family of any Congressman that we are as close to as we are to the Rostenkowskis or that we have had more enjoyment with along life's line.

I have been to a lot of unveilings, but I guess this is about the biggest crowd that I have ever seen. Dan, what a pleasure it is to be here today.

Being elected to the chairmanship of a major committee of the House is in most cases the crowning achievement of a Member's career here. Serving as chairman of the Ways and Means Committee is one of the highest political posts this Nation has to offer. In every real sense, you are at the helm of the economy of the greatest nation in

Speaker Thomas P. O'Neill, Jr., addresses assemblage in Ways and Means hearing room.

the world. What this committee does can either greatly benefit or hamper this world's great economic locomotive, the American economy. To be chairman of this committee is indeed an awesome responsibility.

We, in Congress, and our constituents are indeed fortunate that we have as chairman a man who puts the interests of the country before partisan interests, the interests of average Americans before special interests.

The Founding Fathers constructed a complicated and limited government that diffuses power and responsibility among different branches, and put many obstacles in the way of passing legislation. Fortunately, our country has had legislators who were not intimidated by these obstacles, but rather challenged by them.

They are the men and women who want to get things done. They spend their time drawing plans rather than offering opinions. In times of national crisis, they make the most inefficient form of government a model of efficiency. Dan Rostenkowski has been one of these legislators.

Dan Rostenkowski helps to make the system work. Dan is a Congressman's Congressman. He loves the institution. He loves its work. He loves its responsibility as the freest body in the world today. He is a politician's politician. Dan, the nice guy. Dan believes that it is nice to be important, but it is more important to be nice.

[Applause.]

Speaker O'NEILL. Abundant in knowledge, effervescent in personality, gregarious by nature, an entertainer at times—he does a marvellous job on the song "Chicago." He loves Chicago. He loves his people. People interest him, and he follows his district well at home. He is a beautiful, thoughtful individual, a born leader. How happy we are that he is a Democrat.

[Applause and laughter.]

Speaker O'NEILL. Last year under his leadership, facing a staggering revenue shortfall, the House passed a revenue bill just eight weeks before the election. Believe me, it took courage and ability to be able to do that.

This year, the Social Security System—the greatest piece of legislation ever passed in the history of this Congress—was facing a revenue crisis. Under his leadership, under his tutelage, under his guidance, the Congress saved the system.

His tasks and those of his colleagues have not been easy, considering our current problems, and they won't get any easier. He is always ready for the challenge because he is in the House, and because of this we offer to him a special testimonial today, and to you, LaVerne, the whole family and friends.

[Applause.]

Mr. GIBBONS. Thank you, Mr. Speaker. As always, well done.

Our next speaker is, of course, a former member of the committee. He was helped along his way by the tutelage that he gained here in the "Mills Iron Circle." He distinguished himself in many fields before becoming the Vice President of the United States.

Seven other men who served on this committee eventually became Vice President of the United States, none with greater distinction than our next speaker, the Honorable George Bush, Vice President of the United States.

[Standing ovation.]

Remarks of the Honorable George Bush, Vice President of the United States

Vice President BUSH. What a fantastic turnout for Rostenkowski, and he is not even dead yet!

[Laughter.]

Vice President BUSH. I am very pleased to be here today, Mr. Speaker, and distinguished members of the President's Cabinet, and members of the committee and of the Senate. I really was honored when Dan asked me to drop by and say a few words.

I can't wait to see the picture, Rosty's picture. I hope he got Wilbur's artist. Wilbur looks to me like he had his high school photo done.

[Laughter.]

Vice President BUSH. I hope the same guy did the picture, and we will see that in a few minutes.

I look around the room and I see many of the staff of the Committee on Ways and Means, both majority and minority, with whom I was privileged to serve. This committee has always had a wonderful staff that supported both sides.

I would like to say hello to the staffers here this morning. I feel a certain kinship with you all. I might have started out with Dan on the Ways and Means Committee, but he has now gone on to become chairman, and I have gone on to staff work down at the White House.

[Laughter.]

Vice President BUSH. Let me just say a quick word about service on the committee. In 1967, Barber Conable, now the Republican side's ranking member, and I went on the committee together, and I really didn't know what to expect. I was a freshman Member of Congress. From the minute I became the lowliest part of the committee, I was made to feel at home. Those of you in the Congress know what I am talking about, some of the rest of you might not.

This is a very special committee. From our distinguished Chairman Wilbur Mills right to everybody else, including Hughlon Greene and the late Walter Little, we were made to feel very much a part of the

Vice President Bush arrives for the ceremony. From left to right: Barber B. Conable, Jr., Ranking Minority Member of the Committee; Senator Bob Dole, Chairman of the Senate Finance Committee; Margaret M. Heckler, Secretary of Health and Human Services; Donald T. Regan, Secretary of the Treasury; Robert Michel, House Minority Leader; and Jim Wright, House Majority Leader.

proceedings here, and it has been that way under Wilbur, it was that way under Al Ullman, and it is that way now under Danny Rostenkowski. It is a very special thing, a privilege to be a part of this committee.

I have great respect for our Chairman Dan Rostenkowski. I can only echo the words that his friend, Tip O'Neill, said about his service on this committee, his service to this Congress, and indeed his service to the country.

Dan, I am here on behalf of the downtown crowd, the Executive Branch, to wish you Godspeed in the future, to thank you for your fantastic service to the country. Thank you very, very much. [Applause.]

Mr. GIBBONS. Mr. Vice President, we are not trying to hurry you off, but your staff has told me that they have other tasks for you today. So if you have to leave, we will understand.

Vice President BUSH. I am going to stay right here.

Mr. GIBBONS. Good. I just wanted to explain why you might have to go shortly.

While the Committee on Ways and Means has nurtured 21 Speakers, 8 Vice Presidents, 7 Presidents, and more than 30 Cabinet Members, 4 Supreme Court Justices, and Lord knows how many others of us who will never even make a footnote in history, we sometimes miss the cream of the crop. Our next speaker is a very distinguished Texan, but a very fine American.

[Laughter.]

Mr. GIBBONS. A very fine American, the Honorable Jim Wright.

[Applause.]

Remarks of the Honorable Jim Wright, Majority Leader of the House of Representatives

Mr. WRIGHT. Thank you very much, Sam.

Mr. Chairman, Mr. Vice President, Mr. Speaker, Dan Rostenkowski and your beautiful family, Mrs. O'Neill, my colleagues and friends, in all of the quarter of a century that Dan Rostenkowski and I have been friends, I have always known deep down inside, I guess, that someday I would go to the hanging of Dan Rostenkowski.

[Laughter.]

Mr. Wright. It is easy to see, Father, that there is no election going on in Chicago today, because you are all here. But lest I be accused of intruding into Chicago's most personal affairs, let me disabuse your mind by a little poem that I have written for this occasion.

In Chicago the corpses of Kennedy, Glenn and Mondale
lie piled high in layers,
But so long as I know Rostenkowski will win,
I don't get involved with no mayors.

[Laughter and applause.]

Mr. Wright. This is the sentiment of the occasion.

They tell you all of these glowing things about the Ways and Means Committee, and it is true that all of the rest of us stand in awe of this committee. Dan has asked that I describe to you my first understanding of just what the committee did.

When I came to Congress all those many years ago, the chairman of this committee was a very distinguished old gentleman from Tennessee named Jere Cooper. There [indicating] is his portrait. I stood as much in awe of him as I did of the President of the First National Bank of Weatherford, Texas.

[Laughter.]

Mr. Wright. I was intimidated by his very presence, but not so with a young man who later came to Congress, not on that occasion I want to assure you. He had the temerity to run against Jere Cooper in the Democratic primary in that district in Tennessee that Mr. Cooper had represented for so many years.

This young man, who was a very earthy sort, went out among the farming constituency, on the byroads, crossways and the little town squares, and he would assemble his crowds. His speech went something like this:

He said, "Now everybody knows that when a man goes to Congress the only way he can serve his people is by getting hisself on a committee that will do him some good.

"When Jere went to Congress, he could have gotten hisself put on the Agriculture Committee and done something for all the farmers around here in Tennessee, but Jere didn't get hisself put on the Agriculture Committee.

"Jere could have gotten hisself on the Public Works Committee, where he could have built you all some dams and roads and post offices, some things that would have done some good for you and your families. But did Jere do that? Nooo, Jere did not get on any Public Works Committee.

"Why, do you know what he did? He went up there and got hisself put on what they call the 'Ways and Means Committee,' that is what he did. Now for them who don't know, let me just tell you what that is. That there committee is the committee that spends all its time figuring up new 'ways and means' to get into your pocket and raise your taxes."

[Laughter.]

He said, "Jere, he was so good at it that they elected him *chairman*."

[Laughter.]

Mr. Wright. Few men in history have been that good at it, and I number among them three in the room today.

[Laughter.]

The Majority Leader, Jim Wright of Texas.

Mr. WRIGHT. But our honoree today is a man's man. As the Speaker has said, he is a legislator's legislator. You know that he is a Chicagoan, but above all that he is an American's American.

To serve on this committee is a particular honor and a great responsibility bestowed by one's colleagues. We choose with care those to whom we grant this responsibility. Members of this committee are not appointed; they are elected by the Congress. We look with great discernment among our Members and try to select those who will do that which is right, not that which is temporarily popular; not necessarily that which is expedient, but that which is responsible. From this number, one is elected by the membership to be the chairman. There is no greater position of responsibility or leadership in the American Government than to be Chairman of the Committee on Ways and Means of the United States House of Representatives.

Many things may be said about Dan Rostenkowski, some of them will be true.

[Laughter.]

Mr. WRIGHT. He may occasionally lose his temper, but he will never lose his independence.

Dan may occasionally be in error, as all of us being human will, and even occasionally he will be in doubt, but Dan Rostenkowski will never be in bondage with the ideas of another.

Dan, while serving those who chose him and his political party, knows how to put patriotism above partisanship, and primarily he can be counted on by all of us to serve what in his own mind, heart and conscience is the interests of the United States of America.

He is his own man, and it is because of that that those of us who know Dan Rostenkowski respect him. I know that all of us reflect honor upon ourselves and upon our institution when we honor Dan Rostenkowski today.

[Applause.]

Mr. GIBBONS. Thank you, Mr. Majority Leader.

The next person to come and join us today to honor Dan Rostenkowski is a very fine gentleman from Illinois, the Minority Leader of the House of Representatives, the Honorable Robert Michel.

[Applause.]

Remarks of the Honorable Robert Michel, Minority Leader of the House of Representatives

Mr. MICHEL. Thank you, Mr. Chairman, Mr. Vice President, Mr. Speaker, and members of the President's Cabinet, distinguished members of the other body, and ladies and gentlemen.

May I allay your fears, Danny, at the very outset. I did not come here to sing your praises today.

[Laughter.]

Mr. MICHEL. But I have to say, too, what an event this is.

I guess you can be so close to an individual as I have been to Dan for many, many years, coming from the same State, with offices right next to one another, playing golf together and socializing from time to time, even though occupying some pretty expensive real estate over there in the Capitol, to come back here and to see this outpouring, as the Speaker indicated, probably the largest unveiling of a portrait we have seen; I have got to be impressed with the power this fellow from Illinois has.

I think we are all obviously very proud in Illinois of having Dan as one of the members of our delegation, and to have achieved so much at a relatively young age. I guess all too frequently those who deserve it really are not so appropriately honored while they are still with us.

I have to confess to some apprehension on just how the artist would picture my friend Dan Rosty. Would it be with that golf club in his hand? Would it be in a fit of exultation that I have seen in him?

[Laughter.]

Mr. MICHEL. Surely it wouldn't be in that stultified pose, you know, sitting there with the gavel in that kind of pose. I am happy to note, even before seeing the real product, through the program, that there he is, just as I pictured him.

[Laughter.]

Mr. MICHEL. The artist has really captured him.

I guess one final note. Having his portrait at such a relatively young age, and looking around the Capitol at the number of portraits that have been done of those in their most advanced years, I am sure, knowing those folks from the City of Chicago, knowing the kind of district Dan has—you all don't recognize the kind of district he comes from and what a sure bet it is—he will be here forever. Chances are that before he leaves this place, there will have to be an update!

[Laughter.]

Mr. MICHEL. I just hope that some of us will still be around, not necessarily here, but to come back for that second unveiling.

Dan, it is good to be here.

[Applause.]

Two Illinoisans, the Chairman and the Minority Leader, Bob Michel, enjoy the moment.

Mr. GIBBONS. Partisanship has never been a characteristic of the Committee on Ways and Means during the tenure that I have served on it. We do have our partisan differences, but we have always been able to pull together and to work together to serve our country. A lot of that has been because of the chairmen who have worked that way, but a great part of that success has been due to the great ranking minority members that we have had on the Ways and Means Committee.

When I came to the committee, I sat next to our next speaker. They sat us both on the Republican side of the aisle because there were not enough seats on the Democratic side. So I got to know him then. He is a very fine individual, a real scholar of the law of taxation, indeed of all the matters that the Ways and Means Committee covers.

He works hard to hold his people together, to present his proposals, and to get many of them adopted. No chairman can be a great chairman on this committee unless he is able to work with a great minority leader of this committee. No man could fill that job better than our next speaker, Barber Conable.

[Applause.]

Remarks of the Honorable Barber B. Conable, Jr., Ranking Minority Member, Committee on Ways and Means

Mr. CONABLE. Thank you, Sam.

Mr. Speaker, Mr. Vice President, and other distinguished members of the Cabinet and the other body.

When I had a minor complaint as a boy, my mother used to say, "Those born to be hung are not going to die of natural causes."

[Laughter.]

Mr. CONABLE. Danny, you were born to be hung.

[Laughter.]

Mr. CONABLE. You are a sturdy fellow, and we are glad we are here to praise you and not bury you.

I would like to speak particularly to the people of Chicago who are here, I understand, in such great numbers. We here, as Dan's colleagues, think of him as having two worlds.

There are very few people who have given as much devotion and as much close attention to his constituency as Dan Rostenkowski. He has never moved his family here. He goes home every weekend. He is obviously part of the very world of Chicago, and I know how proud you are of him.

His other world has its epicenter right here in this room. The vibrations go out from here not only throughout the country, but around the world, because what we do here does affect the entire free world. Thus I can sense the pride that you from Chicago have in Dan's great success among his colleagues here.

We not only give respect to our chairman, but today we give him immortality as defined by a painter of talent. I celebrate with all of you here the permanent evidence that Dan Rostenkowski has arrived as one of the preeminent citizens of the world.

I also want to bear witness to his decency and thoughtfulness to a colleague whose position requires some competition in the processes of legislation and the world of ideas.

I admire your abilities, Mr. Chairman. I value your friendship, and the joys of this happy moment of recognition for your many services to the public.

Thank you.

[Applause.]

Mr. GIBBONS. Barber is always a man of few words, but a man whose word you can count on.

Next let me introduce a very valuable part of the Rostenkowski team.

All of us know of the existence of LaVerne Rostenkowski, but very few of us in the Congress have been privileged to meet her, because she has always stayed at home and has kept the homefires going. She has raised the family with some help from her husband. She has done the chores, as far as we know, without complaining, and with obviously a great deal of success.

She is a very charming lady, and I next call upon her to unveil the painting.

[Applause. Mrs. Rostenkowski unveiled the portrait. Applause.]

Mr. GIBBONS. Continuing the role that she has chosen for herself, she will remain silent, at least on this occasion.

Now I would like to introduce the gentleman who is the artist, Mr. Robert Bentley.

[Applause.]

Mr. GIBBONS. And Mrs. Bentley is here, too.

[Applause.]

Mr. GIBBONS. We come now to the high point of this ceremony. I am going to introduce the chairman. I am going to be brief because so many things have been said.

I want to say that having had the privilege of sitting next to him for many, many hours, and for many, many years, I greatly admire him. He is all the things that the previous speakers have said. He is a hard

Mrs. Rostenkowski unveils the portrait of the Chairman.

worker. He is very intelligent. He is a very honest and decent person, a man who puts the good of the country ahead of partisan or local matters.

I have learned to admire him, sitting first at a distance from him and watching him as he worked, and then sitting at his right hand to try to assist him in his work. I know him to be a man of his word, a man who will give you clear signals as to which direction he wishes to go. If he has to change direction, he will give you a warning so that you can be sure that you are there working with him.

This portrait will hang for a long time so that those who follow can remember him. He came here as the youngest member of the House of Representatives. After service on other committees, he soon became a member of the Committee on Ways and Means.

Working hard and progressing up the ladder, he has become the chairman. He is destined to be one of its great chairmen, and I believe he is destined to serve in other great positions of responsibility in our government.

I hope, Danny, that your life will be long, and that you will spare me the misery of ever having to wield this gavel in anything other than in an unveiling ceremony. I have a great admiration for you.

Our distinguished chairman, the Honorable Dan Rostenkowski.

[Applause.]

Remarks of the Honorable Dan Rostenkowski, Chairman of the Committee on Ways and Means

Chairman ROSTENKOWSKI. Thank you very much.

Ladies and gentlemen, there was a grave decision to be made about just what posture I would take when we knew that Robert Bentley was going to do this portrait.

[Chairman Rostenkowski holds a golf club. Laughter.]

Chairman ROSTENKOWSKI. For a time, most people in the District of Columbia thought that I was a great golfer.

[Laughter.]

Chairman ROSTENKOWSKI. As a matter of fact, after having had my share of publicity in one of the local newspapers, when I got on a tee and told them that my handicap was a 19, nobody would believe it. By the second hole, they were saying that it should be a 26!

[Laughter.]

Chairman ROSTENKOWSKI. Today certainly is an historic event in my life. Mr. Vice President, Tip, Jim, Bob, Mr. Secretary, Madam Secretary, my pal Bob Dole, Barber, and Sam, thank you very much. Wilbur and Al and all my dear friends from Chicago, my sweetheart Millie who keeps the "old man" in line. The two worlds of Dan Rostenkowski today are indeed in one room.

All of you here from Chicago know how much I love my family. This is kind of an historic occasion, not just because of the unveiling, but also for the fact that for the first time in the 25 years that I have been in Washington, all of the Rostenkowskis are here.

[Applause.]

Chairman ROSTENKOWSKI. My two sisters, Marcia and Gladys.

[Applause.]

Chairman ROSTENKOWSKI. Then, not necessarily in the order of their age: My baby, Stacy.

[Applause.]

Chairman ROSTENKOWSKI. The emotional one in the family, my daughter Kristie.

[Applause.]

Chairman ROSTENKOWSKI. Next to the youngest, my movie actress, Dawn.

[Applause.]

Chairman ROSTENKOWSKI. Then the one, Millie, that you had better watch out for, who has a love affair going with your husband, my daughter Gayle.

[Applause.]

Observing the ceremony from left to right: Speaker O'Neill, Chairman Rostenkowski, Mrs. Rostenkowski, Mrs. O'Neill, daughters Gayle, Kristie, Stacy and Dawn, and the artist, Robert Bentley.

Chairman ROSTENKOWSKI. It could not have been done without their loyalty, without a total understanding of just what this job is.

Twenty-five years ago we decided that Danny Boy could fly up and back to Chicago as opposed to bringing our family here, because then we weren't working 12 months out of the year. Had we moved here to Washington, the children would have been here and I would often be in Chicago. Chicago was, and always will be, home. So the real leader of the Rostenkowski group decided that she would stay *home* and raise the kids.

Ladies and gentlemen, what a terrific job she did, my wife, LaVerne.

[Applause.]

Chairman ROSTENKOWSKI. You know, I find that being a politician is quite an honorable profession. I think the way we have been "educated" recently about that word makes one think that there is something devious about the job. I think that politics, the art of compromise, the avenue of understanding, of getting to know just what you can and what you can't do, is what really governs this country.

I compromise. I may come from an extreme position, but I think getting things done is what this country wants, not working in stalemate, not getting into the "best" position, but working things out. That is why being chairman of this committee, with its awesome responsibility—and there are only two other people in the room, Al and Wilbur, who understand—is *doing* something. It is making things happen.

If that is what I will have said about me, then there *will* be another unveiling, and I think I will have accomplished what my dad and mother never thought was going to happen to a kid that they thought was going to be in prison by the time he was 21!

[Laughter and applause.]

Chairman ROSTENKOWSKI. You know, it is a great feat for a fellow like Wallie Wilczek and myself, two Polish kids from the same neighborhood. Wallie, I want you to stay alive a long time because I want you to always say my prayers.

[Applause.]

Chairman ROSTENKOWSKI. Ladies and gentlemen, you do me a great honor. You bring to me a great sense of belonging. All of you from

Chicago who have come to this unveiling, and those of you who are former Members, friends and staff, it is tough for me to work this job, I have to *really* work at it. But I hope that when history is written that, as was pointed out, some of the legislation we have passed will be viewed as in the best interests of the country, and that history will record Danny Rostenkowski as having made a modest contribution to this great Republic.

[Applause.]

Chairman ROSTENKOWSKI. To my colleagues on the committee, Danny Rosty is nothing without you. I look for consensus. I work at it. I make notes, and I remember. [Laughter.] But I only do it so that we can proceed with orderly government. Some of us make mistakes on the committee, but the fact of the matter is that it is from this room that much destiny is written. It is not easy, but it has to be done.

George, nobody, 25 years ago, thought that I would be chairman, but who the hell thought you would be Vice President?

[Laughter.]

Chairman ROSTENKOWSKI. I have a money-clip here. When George was a candidate for President, I bet him this clip that he would never be in the Executive Office. I lost, and he is a great Vice President. Sooner or later, I guess I should pay him the money clip that I owe him! He is a great American, and he is my friend.

[Applause.]

Chairman ROSTENKOWSKI. Ladies and gentlemen, thank you. I love you all. [Standing ovation.]

Mr. GIBBONS. We have introduced the subject of the portrait, and now we have to recognize those who made the portrait possible. The Portrait Committee is composed of friends of Mr. Rostenkowski. They are here today, and I would like to recognize them, and ask the co-chairmen of that committee, Mr. Kemper, Mr. Schoessling, and Mr. Weithers, to stand, please.

[Applause.]

Mr. GIBBONS. Now to conclude this ceremony, I will call upon our Chaplain, Father Wilczek.

Benediction by the Reverend Walter M. Wilczek, C.R.

Reverend WILCZEK. God, Our Father, we thank You for this day on which we honored a friend, father, husband, and herald of Your people. Once again we come to You in the mood of prayer, drawn by compelling needs and deepening desires which You alone can help us meet. In these moments of honoring Danny Rostenkowski, we pause a moment to bless the memory of his father, Joseph, and mother, Priscilla, and we pray that each of us here, family, friends, and colleagues, will commit ourselves to labor in Your love and to live in harmony with Your laws.

May we not impoverish others for the sake of personal prosperity, or ignore the rights of the weak to buttress positions of power. Turn our strength to the work of justice, mercy and peace, so that in our efforts to promote the common good, we may find the joy and satisfaction of a virtuous life.

Continue to bless our country with the power of Your presence. Bless all of our leaders in church, state, important business and labor, and all our people, that we may stand before the world as a nation devoted to peace, justice, the truth, and good will.

As we conclude these ceremonies, we pray in a deeply personal way for Dan Rostenkowski. Grant him light for dark days, strength for weak moments, and the will to play his full part in the drama of this age. May the benediction of Your presence be with him and upon us all. Amen.

Chairman GIBBONS. This concludes our ceremony.

[Applause.]

[Whereupon, at 11:40 a.m., the ceremony was concluded.]

A proud and
happy moment for Chairman
and Mrs. Rostenkowski.

Chicago friends of
Dan Rostenkowski gather
on the Capitol steps prior
to the unveiling.